

KV-W28MH11/W28MN11 KV-W32MH11/W32MN11

RM-850

SERVICE MANUAL



GE Model

KV-W28MN11
Chassis No. SCC-H22A-A
KV-W32MN11
Chassis No. SCC-H22B-A

HK Model

KV-W28MH11
Chassis No. SCC-H23B-A
KV-W32MH11
Chassis No. SCC-H23A-A

WB Model

KV-W32MH11
Chassis No. SCC-H24A-A

AG-1 CHASSIS

MODELS OF THE SAME SERIES

KV-W28MH11/W28MN11	
KV-W32MN21	
KV-W32MH211/W25M111/W28MN31	

SPECIFICATIONS

Power requirements

110-240V AC, 50/60Hz

Power consumption

240 W

Television system

B/G, I, D/K, M

Color system

PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58

Stereo system

NICAM Stereo B/G, I; A2 (German) stereo B/G

Channel coverage

See "Channel coverage" at the bottom.

Antenna

75-ohm external antenna terminal for VHF/UHF

Audio output (speaker)

15 W × 2

Number of terminal

Video Input: 4, Output: 1

Audio Input: 4, Output: 1

S1 Video/S Video

Input: 4, Output: 1

Y: 1 V_{p-p}, 75 ohms, unbalanced, sync negative,

C: 0.286 V_{p-p}, 75 ohms

Picture tube

HD Trinitron

Tube size (measured diagonally)

KV-W28: 28 inches

KV-W32: 32 inches

Screen size (measured diagonally)

KV-W28: 66 cm

KV-W32: 76 cm



TRINITRON® COLOR TV
SONY®

Dimensions (w/h/d)

KV-W28: 750 × 520 × 528 mm
KV-W32: 905 × 600 × 585 mm

Mass

KV-W28: 49.5 kg
KV-W32: 73 kg

Accessories Supplied

Remote commander (1)
Size R6 (AA) battery (1)
Conversion mains plug
KV-W28: TV stand SU-W28
KV-W32: TV stand SU-W32

Optional

Design and specifications are subject to change without notice.

Channel coverage

M E/ASIA/CATV W EURO

Receivable channel	Channel display
E-2 to E-12	C02 to C12
E-21 to E-69	C21 to C69
S-01 to S-03	S42 to S44
S-1 to S-41	S01 to S41
Indonesia	
1A	C01
2 to 11	C03 to C12
Morocco	
M-4 to M-7	C70 to C73
M-8 to M-10	C8 to C10
New Zealand	
1	C01
2 to 11	C03 to C12
27 to 62	C27 to C62

HK/UK

Receivable channel	Channel display
Hong Kong, United Kingdom	
B-21 to B-68	C21 to C68
Ireland	
A to J	C01 to C09
South Africa	
4 to 13	C04 to C13
21 to 68	C21 to C68

AMERICA/CATV AMERICA

Receivable channel	Channel display
2 to 79	C02 to C79
A-1	S99
A-2	S98
A-3	S97
A-4	S96
A-5	S95
A-6	S06
A-7	S05
A-8	S01
A to W	S14 to S36
AA to CCC	S37 to S65

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

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SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Getting Started

WARNING

To prevent fire or shock hazard, do not expose the TV to rain or moisture. Dangerously high voltages are present inside the TV. Do not open the cabinet. Refer servicing to qualified personnel only.

For general safety:

- Do not expose the TV to rain or moisture.
- Do not open the rear cover.

For safe installation:

- Do not block the ventilation openings.
- Do not install the TV in hot, humid or excessively dusty places.
- Do not install the TV where it may be exposed to mechanical vibrations.

For safe operations:

- Do not operate the TV on anything but 110-240 V AC.
- Do not operate the TV if any liquid or solid object falls in it—have it checked immediately.
- Do not keep the TV plugged in if you are not going to use it for several days.
- Do not pull the power cord to disconnect the TV. Pull it out by the plug.

Caution

Caution:
Avoid touching the screen surface and take care not to scratch it with hard objects.

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Getting Started

- 6 Introducing the menu
- 7 Changing the menu language
- 8 Presetting channels

Operations

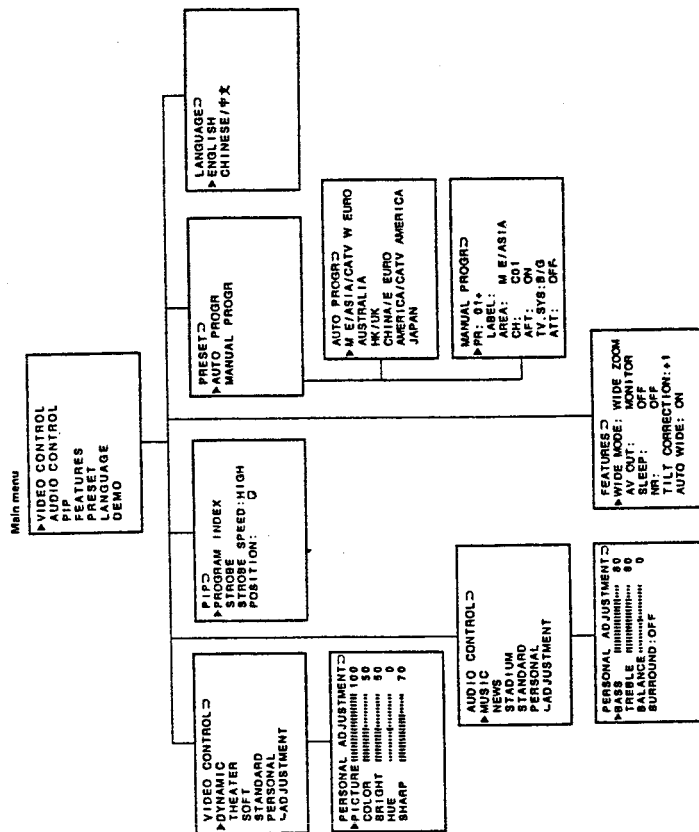
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Introducing the menu

You can preset channels and set the wide mode, picture quality, sound, and other settings using the on-screen menus.



Getting back to the previous menu

Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to the first line ($\square$) of each menu (except for the main menu), and press ENTER.

Cancelling the menu screen

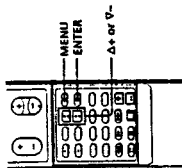
Press MENU.

Notes

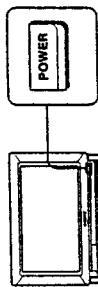
- NOTES**
- if more than 60 seconds elapse after you press a button, the menu screen disappears automatically.
 - DEMO in the main menu briefly introduces the main features available for the TV. Press any button on the remote commander to stop this function.

Changing the menu language

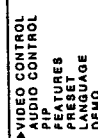
If you prefer Chinese to English, you can change the menu language. You can use the buttons on both the remote commander and the TV.



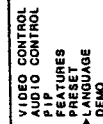
1 Press POWER on the TV.



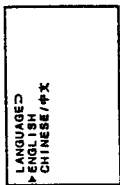
2 Press MENU.



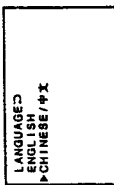
3 Press Δ + or ∇ - to move the cursor (▸) to LANGUAGE.



4 Press ENTER.



5 Press Δ + or ∇ - to select CHINESE.



6 Press ENTER.



7 Press MENU to return to the normal screen.

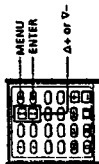


Presetting channels

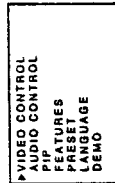
You can preset TV channels easily by storing all the receivable channels automatically. You can also preset channels manually or skip program positions (pages 19 and 20). You can preset channels using the buttons on the TV as well as those on the remote commander.

Presetting channels automatically

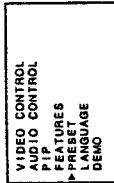
You can preset up to 100 TV channels in numerical sequence from program position 1.



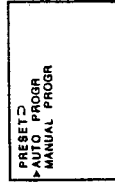
1 Press MENU.



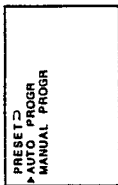
2 Press Δ + or ∇ - to move the cursor (▸) to PRESET.



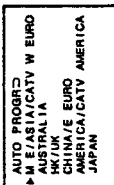
3 Press ENTER.



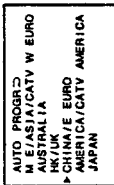
4 Press Δ + or ∇ - to select AUTO PROGR.



5 Press ENTER.



6 Press Δ + or ∇ - to select your area (channel system).
For the areas allocated in each channel system, see "Channel allocation" on page 24.



7 Press ENTER.
Presetting starts from program 1.



Watching the picture in wide mode

-
- A diagram of the back of the device. It shows a rectangular power button labeled "POWER" with a hand icon pressing it. Below the power button is a "STANDBY" switch, which is a small circle with the word "STANDBY" to its left.

3	6	9	-
2	5	8	0
1	4	7	+

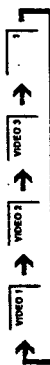
The diagram shows a rectangular button labeled "PROG" on the left. To its right are two circular buttons. The left circular button contains a "+" sign, and the right circular button contains a "-" sign. A hand is shown pointing its index finger at the "+" button.

Press C (once for VHF/UHF channels, twice for cable TV channels), then press the number buttons (two-digit number for VHF/UHF channels, three-digit number for cable TV channels). For example, to select the VHF/UHF channel 4, press C 0 then 4.

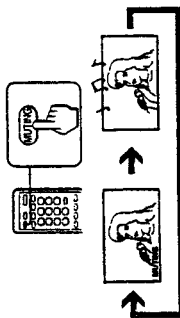
-
- A hand is shown pressing the volume button on a device. The button is labeled 'VOL' and has a '+' sign on the left and a '-' sign on the right.

To switch off the TV temporarily, press POWER on the remote commander.
The STANDBY indicator lights.

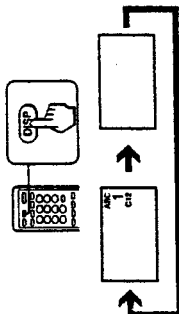
Watching the video input



Press Muting.



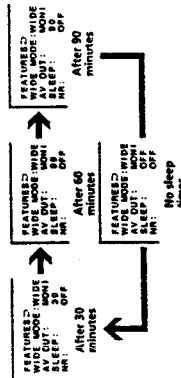
Press DISP.



- When you press **DISP**, the on-screen display shows the picture, sound and wide mode settings as well, all of which disappear after three seconds.

You can set the TV to turn off automatically after the period of time you set.

- 1** Press **MENU**.
- 2** Press **Δ** or **▽** – to move the cursor (**▶**) to **FEATURES**, and press **ENTER**.
- 3** Press **Δ** or **▽** – to move the cursor (**▶**) to **SLEEP**, and press **ENTER**.
- 4** Press **Δ** or **▽** – until the time (in minutes) you want appears.



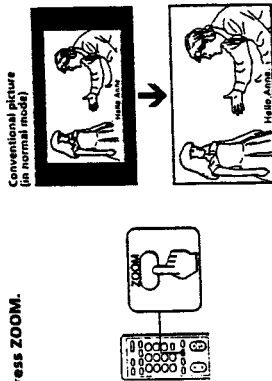
- 5 Press ENTER.**

To cancel the Sleep Timer, select OFF, or turn the TV off.

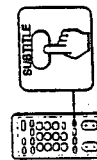
Viewing a movie picture with black bands

Use zoom or subtitle mode to view a movie picture with black bands.

Press ZOOM.



When the subtitles are lost in zoom mode, press SUBTITLE.



To switch the auto wide function
When AUTO WIDE is set to ON, the factory setting, the TV automatically displays the picture on the screen in full mode if an S1 Video signal is received. If you want to select another mode for the signal, set AUTO WIDE to OFF.

- 1 Press MENU.
- 2 Press Δ or ∇ - to move the cursor ($\triangleright$) to FEATURES, and press ENTER.
- 3 Press Δ or ∇ - to move the cursor ($\triangleright$) to AUTO WIDE, and press ENTER.
- 4 Press Δ or ∇ - to select OFF, and press ENTER.

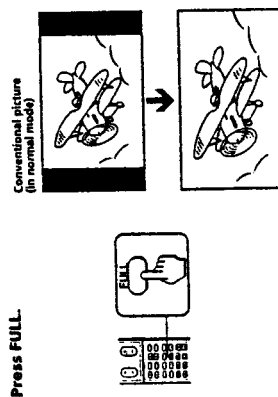
Note

- If you display the PIP screen in zoom mode or scroll the picture with the PIP screen in zoom mode or subtitle mode, the PIP screen may be lost. However, this does not indicate a malfunction.

Viewing a video game screen

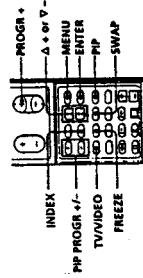
When you view a video game screen with dynamic effect, use full mode.

Press FULL.



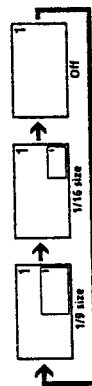
Using the Picture-in-Picture features

You can display a Picture-in-Picture (PIP) screen (small picture) within the main picture of a TV program or a video input.
For the KV-W28, you have to use the connected VCR's built-in tuner to enjoy two different TV programs simultaneously.



Displaying PIP

Press PIP.

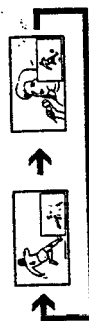


Selecting a TV program or video input in the PIP screen

To select a TV program, press PIP PROG +/- (yellow buttons) for the KV-W32.
For the KV-W28, select a TV program with the PROG +/- buttons on the connected VCR.
To select a video input, press TV/VIDEO.

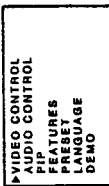
Swapping pictures between the main and PIP screens

Press SWAP.

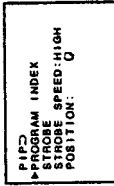


Changing the position of the PIP screen

1 Press MENU.



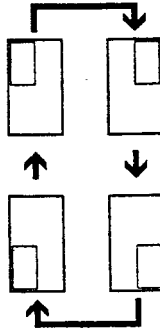
2 Press Δ or ∇ - to move the cursor ($\triangleright$) to PIP, and press ENTER.



3 Press Δ or ∇ - to move the cursor ($\triangleright$) to POSITION, and press ENTER.

4 Press Δ or ∇ - to select the position you want.

Pressing Δ changes the position as shown below.
Pressing ∇ changes the position in reverse order.



Note

- If you display the PIP screen in zoom or subtitle mode, you can move the PIP screen only to the lower left or the lower right.

Freezing the PIP screen

Press FREEZE.

To restore the normal picture, press FREEZE again.

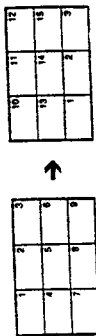
Checking all the preset programs (Program Index)

Press INDEX.

The nine preset programs appear in the separated screen in sequence, switching the picture for each second. The sound is muted. Then next nine sequential programs appear. After all the preset programs are displayed, the programs switch the picture with the sound for each five seconds.

Selecting the picture mode

Pressing **PROGR** + also switches to the next nine programs.



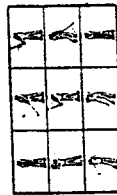
To restore the normal picture

Press the number buttons which you want to watch (e.g., for program 25, press 4, 2 and 5). Pressing **INDEX** also restores the normal picture.

- You can also display nine sequential TV programs using the menu. Select **PROGRAM INDEX** from the PIP menu, then press **ENTER**.
- If you display different TV systems in the Program Index screen, the size of the separated screens may be different.

Displaying frame-by-frame pictures (Strobe)

- Press **MENU**.
- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **PIP**, and press **ENTER**.
- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **STROBE**, and press **ENTER**.



To select the strobe speed

Select **STROBE SPEED** from the PIP menu, and press **ENTER**. Then select **HIGH** (3 seconds), **MIDDLE** (7 seconds) or **LOW** (12 seconds) with Δ + or ∇ -, and press **ENTER**.

To restore the normal picture

Select **STROBE** from the PIP menu again, and press **ENTER**. You can also restore the normal picture with **TV**, **VIDEO**, **PROGR** + / -, **POWER** or **Wide** mode buttons.

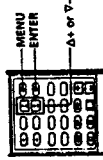
- You can have the normal around when using the strobe feature.

Notes on PIP features

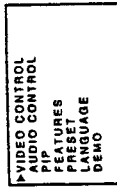
- When you display a VCR picture in the PIP screen at a speed other than normal speed, the picture may be noisy depending on the VCR. The picture can be improved by selecting the smaller size of the PIP screen.
- If you display different color systems in the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be noisy. This is not caused by the malfunction of the TV.

Adjusting the picture setting (ADJUSTMENT)

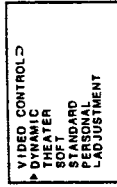
You can adjust the picture quality to suit your taste with the **ADJUSTMENT** option. The adjusted settings are stored in the **PERSONAL** option.



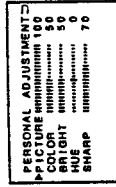
- Press **MENU**.



- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **VIDEO CONTROL**, and press **ENTER**.



- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **ADJUSTMENT**, and press **ENTER**.



- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to the item you want to adjust, and press **ENTER**.

- Press Δ + or ∇ - to adjust the item, and press **ENTER**.

Item	Press Δ + to	Press ∇ - to
PICTURE	Increase picture contrast	Decrease picture contrast
COLOR	Increase color intensity	Decrease color intensity
BRIGHT	Brighten the picture	Darken the picture
HUE	Make skin tones become greenish	Make skin tones become reddish
SHARP	Sharpen the picture	Soften the picture

14-EN | Operations

- To adjust other items, repeat steps 4 and 5.
- Press **MENU** to return to the normal screen.

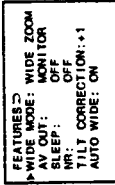
Note

- You can adjust **HUE** for NTSC color system only.

Reducing the noise of the picture (NR)

You can reduce the noise level of the picture when the TV receives a weak signal or when you play a video tape that is in poor condition.

- Press **MENU**.
- Press Δ + or ∇ - to select **FEATURES**, and press **ENTER**.



- Press Δ + or ∇ - to select **NR**, and press **ENTER**.

- Press Δ + or ∇ - to select **ON**, and press **ENTER**.

To turn the noise reduction off, select **OFF** and press **ENTER**.

If the color of the picture is abnormal when receiving programs through the **TV** (antenna) terminal

Press **COLOR SYSTEM** on the TV or change the TV system setting from the menu as described below until the color becomes normal.

- Press **MENU**.
- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **PRESET**, and press **ENTER**.
- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **MANUAL PRGR**, and press **ENTER**.
- Press Δ + or ∇ - to move the cursor ($\blacktriangleright$) to **TV** SYS, and press **ENTER**.
- Press Δ + or ∇ - to change the TV system until the color becomes normal.

Note

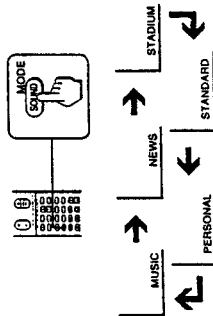
- Normally set **COLOR SYSTEM** to **AUTO**.

Operations | 13-EN

Selecting the sound mode

You can select the sound mode using the menu as well as the SOUND MODE button on the remote commander. Select AUDIO CONTROL from the main menu, then select the desired mode.

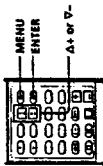
Press SOUND MODE until the mode you want appears on the screen.



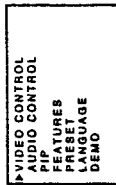
Select	To
MUSIC	Listen to music programs. It gives sound with a live concert effect.
NEWS	Listen to news program. A person's voice can be heard clearly.
STADIUM	Listen to sports program. It gives sound with a sports stadium effect.
STANDARD	Listen to sound other than music, news or sports program.
PERSONAL	Listen to the sound that is adjusted using ADJUSTMENT in the AUDIO CONTROL menu.

Adjusting the sound setting (ADJUSTMENT)

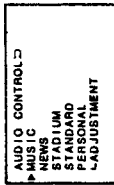
You can adjust the sound quality to suit your taste with the ADJUSTMENT option. The adjusted settings are stored in the PERSONAL option.



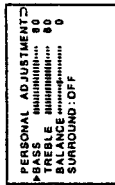
1 Press MENU.



2 Press Δ or ∇ - to move the cursor ($\triangleright$) to AUDIO CONTROL, and press ENTER.



3 Press Δ or ∇ - to move the cursor ($\triangleright$) to ADJUSTMENT, and press ENTER.



4 Press Δ or ∇ - to move the cursor ($\triangleright$) to the item you want to adjust, and press ENTER.

5 Press Δ or ∇ - to adjust the item, and press ENTER.

Item	Press Δ + to	Press ∇ - to
BASS	Increase the bass sound	Decrease the bass sound
TREBLE	Increase the treble sound	Decrease the treble sound
BALANCE	Increase the volume of right speaker	Increase the volume of left speaker

6 To adjust other items, repeat steps 4 and 5.

7 Press MENU to return to the normal screen.

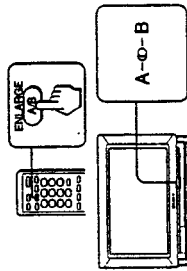
15-EN Operations

Selecting a stereo or bilingual program

You can enjoy stereo sound or bilingual program of NICAM and A2 (German) stereo systems. The initial setting is stereo sound.

Press A/B/ENLARGE repeatedly until you receive the sound you want.

The sound changes and the corresponding indicator lights up as follows:



When receiving a NICAM program:

Broadcasting	On-screen Display	Selected sound (Indicator lit)
NICAM stereo	NICAM	$\rightarrow$ Stereo $\rightarrow$ Regular (A and B)
NICAM bilingual	NICAM	$\rightarrow$ A $\rightarrow$ B $\rightarrow$ Regular (A) (B)
NICAM monaural	NICAM	$\rightarrow$ NICAM monaural (A) Regular

When receiving an A2 (German) stereo program:

Broadcasting	On-screen Display	Selected sound (Indicator lit)
A2 (German) stereo	STEREO	$\rightarrow$ Stereo $\rightarrow$ Monaural (A and B)
A2 (German) bilingual	—	$\rightarrow$ A $\rightarrow$ B (A) (B)

Receiving area for NICAM and A2 (German) stereo programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, etc.
A2 (German) stereo	Australia, Malaysia, Thailand, etc.

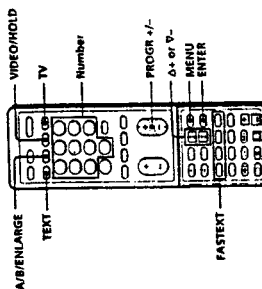
Notes

- If the signal is very weak, the sound becomes monaural.
- If the stereo sound is noisy, select "regular" or "mono." The sound becomes monaural, however, the noise will be reduced.

16-EN Operations

Viewing Teletext

TV stations broadcast an information service called Teletext via a local TV channel. Teletext service allows you to receive various information such as weather forecasts or news at any time. Some of the features, however, may not be available depending on the Teletext service.



Displaying Teletext

- 1 Select a TV channel which carries the Teletext broadcast you want to watch.
- 2 Press **TEXT** to display the Teletext.
A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, P100 appears in the top left corner of the screen.

To switch Teletext off, press **TV**.

Superimposing a Teletext page on the TV picture

- Press **TEXT**.
Each time you press **TEXT**, the screen changes as follows:
- Teletext → Teletext and TV → TV →

Checking the contents of a Teletext service (INDEX)

When Teletext is switched on, you can display the Teletext menu.

- 1 Press **MENU**.



- 2 Press **Δ** or **∇** - to move the cursor (**▷**) to **INDEX**, and press **ENTER**.

Selecting a Teletext page

Press the number buttons to enter the three-digit page number of the Teletext number you want.
If you make a mistake, re-enter the correct page number.

To access the next or previous page, press **PROG +/-**.

Preventing a Teletext page from being updated (HOLD)

A Teletext page may consist of several subpages. You can stop the page scrolling in order to read the text at your own pace.

Press **VIDEOHOLD**.
HOLD appears in the top left corner of the screen.

To resume normal Teletext operation, press **TEXT**.

Using FASTEXT

This feature allows you to quickly access a Teletext page that uses **FASTEXT**. When a **FASTEXT** page is broadcast, a color-coded menu appears at the bottom of the screen. The colors of the menu correspond to the red (TV/VIDEO), green (FREEZE), yellow (SWAP) and blue (PIP) buttons on the remote commander. These colored buttons function as the **FASTEXT** buttons in Teletext mode.

Press the colored button which corresponds to the color-coded menu.
The page is displayed after a few seconds.

Enlarging the Teletext display (ENLARGE)

Each time you press **A/B/ENLARGE**, the Teletext display changes as follows:

→ Enlarge upper half → Enlarge lower half → Normal size →

Revealing concealed information (REVEAL)

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option discloses the information.

- 1 Press **MENU**.
- 2 Press **Δ** or **∇** - to move the cursor (**▷**) to **REVEAL**, and press **ENTER**.
- 3 Press **Δ** or **∇** - to select **ON**, and press **ENTER**.

To conceal the information again, select **OFF**.

Watching a TV program while waiting for a requested Teletext page (TEXT CLEAR)

- 1 Select the Teletext page to which you want to refer.

- 2 Press **MENU**.

- 3 Press **Δ** or **∇** - to move the cursor (**▷**) to **TEXT CLEAR**, and press **ENTER**.

- 4 When the page number is displayed on the screen, press **TEXT** to switch the Teletext on.

To restore the normal Teletext reception, press **TEXT**.

Displaying subtitles (SUBTITLES)

Your Teletext service informs you if a TV program is subtitled.

- 1 Press **MENU**.
- 2 Press **Δ** or **∇** - to move the cursor (**▷**) to **SUBTITLES**, and press **ENTER**.

Note

- If the subtitles are not broadcast on page 888, select the subtitle page using the number buttons.

18-EN Operations

Displaying a Teletext page at the requested time (TIME PAGE)

You can display a time-coded page (e.g. an alarm page) at the time you preset.

- 1 Press **MENU**.
- 2 Press **Δ** or **∇** - to move the cursor (**▷**) to **TIME PAGE**, and press **ENTER**.
- 3 Press the number buttons to enter four digits for the desired time. For example, to enter 7:30, press 0, 7, 3 and 0.

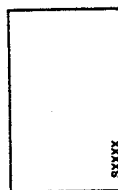


At the requested time, the page appears on the screen.

To restore the normal Teletext reception, press **TEXT**.

Displaying a particular page among several subpages (SUBPAGE)

- 1 Press **MENU**.
- 2 Press **Δ** or **∇** - to move the cursor (**▷**) to **SUBPAGE**, and press **ENTER**.
- 3 Press the number buttons or **PROG +/-** to enter four digits for the desired subpage. For example, to display the second page of a sequence, press 0, 0, 0 and 2.



Customizing the TV

Using the AV OUT (advance rec-out) terminal

You can select the output signal from the MON/TV OUT jacks at the rear of the TV.

The S Video output can be used only when MONITOR is selected. However, it cannot be used in Program Index or Strobe mode even though MONITOR is selected.

- 1 Press MENU.
- 2 Press Δ + or ∇ - to select FEATURES, and press ENTER.

FEATURES	WIDE ZOOM
WIDE MODE	MONITOR
SLEEP	OFF
NR	T CORRECT ON: +1
TILT	AUTO WIDE: ON

- 3 Press Δ + or ∇ - to select AV OUT, and press ENTER.
- 4 Press Δ + or ∇ - to select the output signal, and press ENTER.

Select	To
TV	Output the TV signal.
MONITOR	Output the signal of the picture you are watching as a monitor.

Selecting a TV program output from MON/TV OUT jacks while using the PIP feature

- For the KV-W28, when watching a TV program in the main screen, use PROGR +/- . When watching a video input in the main screen and a TV program in the PIP screen, use PIP PROGR +/- on the remote commander.
- For the KV-W32, use PROGR +/-.

Note

- Do not change the channel while recording with a VCR through the MON/TV OUT jacks. If you change the channel, it also changes the channel you are recording.

Adjusting the tilt of the picture

You can adjust the tilt of the picture if it is not aligned to the TV screen. This may happen due to the direction of the earth's magnetic fields in relation to the position of the TV.

- 1 Press MENU.
- 2 Press Δ + or ∇ - to select FEATURES, and press ENTER.

FEATURES	WIDE ZOOM
WIDE MODE	MONITOR
SLEEP	OFF
NR	T CORRECT ON: +1
TILT	AUTO WIDE: ON

- 3 Press Δ + or ∇ - to select TILT CORRECTION, and press ENTER.
- 4 Press Δ + or ∇ - to select the most suitable value to align the picture position, and press ENTER.

TILT CORRECTION:

-5 - -4 - -3 - -2 - -1 - 0 - +1 - +2 - +3 - +4 - +5

press ∇ - press Δ +

Presetting channels manually

To change the program position for a channel or to receive a channel with a weak signal, preset the channel manually.

For example, preset a channel in program position 8.

- 1 Press MENU.
- 2 Press Δ + or ∇ - to move the cursor ($\triangleright$) to PRESET, and press ENTER.

PRESET	MANUAL PROGRAM
--------	----------------

- 3 Press Δ + or ∇ - to select MANUAL PROGRAM, and press ENTER.

MANUAL PROGRAM	
PR: 01	
LABEL:	M E/ASIA
AREA:	1
AFT:	ON
TV SYS:	B/G
ATT:	OFF

- 4 Select the program position to which you want to preset a channel.

(1) Press Δ + or ∇ - to select PR, and press ENTER.

(2) Press Δ + or ∇ - to select 8.

You can also select the program position with PROGR +/- or the number buttons (e.g., for program 24, press +, 2 and 4).

(3) Press ENTER.

- 5 Select your area (channel system).

For the areas allocated in each channel system, see "Channel allocation" on page 24.

(1) Press Δ + or ∇ - to select AREA, and press ENTER.

(2) Press Δ + or ∇ - to select your area, and press ENTER.

- 6 Select a channel which you want to preset.

(1) Press Δ + or ∇ - to select CH, and press ENTER.

(2) Press Δ + or ∇ - until the channel you want appears on the screen.

You can also select the channel directly using the number buttons. Press C (once for VHF/UHF channels, twice for cable TV channels), then the number buttons (e.g., for channel 5, press 0 and 5).

(3) Press ENTER.

To preset other channels

Repeat steps 4 to 6.

Disabling program positions

By disabling unused or unwanted program positions, you can skip those positions when you press PROGR +/-.

For example, disable program position 8.

- 1 Display the MANUAL PROGRAM menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)

- 2 Press Δ + or ∇ - to move the cursor ($\triangleright$) to PR, and press ENTER.

- 3 Press PROGR + or - until 8 appears.

- 4 Press Δ + or ∇ - to select "-", and press ENTER.

To skip other program positions, repeat steps 3 and 4.

To restore the skipped program positions

In step 4 above, press Δ + or ∇ - to select "+", and press ENTER.

Customizing channel names

You can caption each channel number using up to five letters to be displayed on the screen.

- 1 Display the MANUAL PROGRAM menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)

- 2 Press Δ + or ∇ - to move the cursor ($\triangleright$) to PR, and press ENTER.

- 3 Press Δ + or ∇ - to select the program position you want to caption and press ENTER.

- 4 Press Δ + or ∇ - to move the cursor ($\triangleright$) to LABEL, and press ENTER.

- 5 Press Δ + or ∇ - to select a letter or number, and press ENTER for each caption space (up to five.)

Each time you press Δ + or ∇ -, the letter (number) changes as shown below.

A → B → ... → Z → 0 → 1 → ... → 9 → - → / → - → + → - (space)

For the caption space you want to leave blank, select "-".

- 6 Repeat steps 2 to 5 to caption other channels.

To erase a caption

In step 5 above, select " (space)".

Manual fine-tuning

Normally, the automatic fine-tuning (AFT) is operating. However, if the picture of a channel is distorted, you can use the manual fine-tuning function for the channel to obtain better picture reception.

- 1 Display the MANUAL PROGRAM menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)

- 2 Press Δ + or ∇ - to move the cursor ($\triangleright$) to PR, and press ENTER.

- 3 Press Δ + or ∇ - to select the program position corresponding to the channel which you want to manually fine-tune, and press ENTER.

Setting the remote command mode

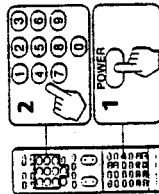
- 4 Press Δ + or ∇ - to move the cursor ($\triangleright$) to AFT, and press ENTER.
- 5 Press Δ + or ∇ - to select OFF, and press ENTER.
- 6 Press Δ + or ∇ - to fine-tune the channel so that you get the best TV reception. As you press these buttons, the frequency changes from -128 to +128.
- 7 After fine-tuning, press ENTER. The fine-tuned level is stored.

Improving TV signal

If the reception signal is very strong, you can attenuate it to obtain better picture reception.

- 1 Display the MANUAL PROGR menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)
- 2 Press Δ + or ∇ - to move the cursor ($\triangleright$) to PR, and press ENTER.
- 3 Press Δ + or ∇ - to select the program position corresponding to the channel whose signal is very strong, and press ENTER.
- 4 Press Δ + or ∇ - to move the cursor ($\triangleright$) to ATT, and press ENTER.
- 5 Press Δ + or ∇ - to select ON, and press ENTER.

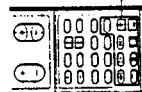
You can use the supplied remote commander to operate the TV and Sony video equipment, such as a VCR or multi-disc player. To operate Sony video equipment, first set the remote command mode for the video equipment you want to use.



- 1 Press and hold the POWER button in the VCR control area.
- 2 Press the number buttons that correspond to the remote command mode.

Mode number buttons	Remote command mode
0 and then 1	VTR1 (e.g., Beta format VCR)
0 and then 2	VTR2 (e.g., 8 mm format VCR)
0 and then 3	VTR3 (e.g., VHS format VCR)
0 and then 4	MDP (multi-disc player)

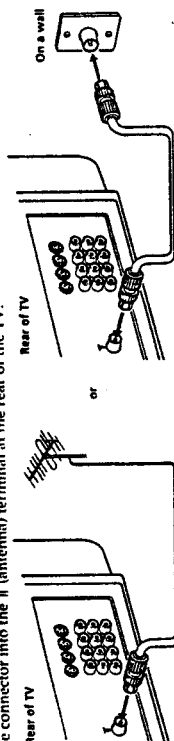
After setting the remote command mode, you can use the following buttons to operate the video equipment.



Connections

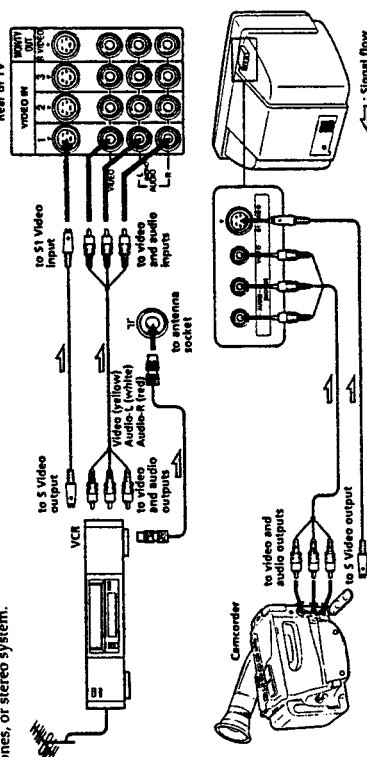
Connecting a VHF antenna or a combination VHF/UHF antenna—75-ohm coaxial cable (round)

Attach an optional IEC antenna connector to the 75-ohm coaxial cable. Plug the connector into the "I" (antenna) terminal at the rear of the TV.



Connecting optional equipment

You can connect optional audio/video equipment to this TV such as a VCR, multi-disc player, camcorder, headphones, or stereo system.



When connecting a monaural VCR

Connect the yellow plug to VIDEO and the white plug to AUDIO-L (mono).

Note on the S1 Video signal

When the S1 Video signal is input through the VIDEO IN 1/2/3 jack, set AUTO WIDE to OFF if you do not want to display the picture in full wide mode (see page 11).

If both S Video and video signals are input

The S Video input signal is selected. To view a video signal, disconnect the S Video connection.

Note on the video input

When no signal is input, the screen becomes blue.

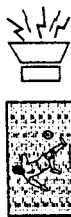
When connecting a VCR to the VIDEO IN 3 jacks

This TV is equipped with two sets of the VIDEO IN 3 jacks. Two sets are not available to be used at the same time. When using equipment connected, turn off other equipment not in use.

Troubleshooting

If you have any problems, read this manual again and check the countermeasure for each of the symptoms listed below.
If the problem persists, contact your nearest authorized service center or dealer.

Snowy picture Noisy sound



- Check the antenna.
- Check the antenna connection on the TV and on the wall.

Dotted lines or stripes



- This may be caused by local interference (e.g. cars, neon signs, hair dryers, etc.)
Adjust the antenna for minimum interference.

Double images or "ghosts"



- This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

Good picture Noisy sound



- Check the TV SYSTEM setting.

Channel allocation

No picture
No sound



- Press POWER.
- Press POWER to turn the TV off for 5 to 6 seconds, then turn it on again by pressing POWER.
- Check the antenna connection.
- Check the VCR connections.

Good picture
No sound



- Press VOL +.
- Press MUTE.

No color



- Adjust COLOR in the VIDEO CONTROL menu's ADJUSTMENT option.
- Check the COLOR SYSTEM setting.

TV cabinet creaks

- Even if the picture or the sound is normal, changes in the room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.

Areas allocated in each channel system

M E/ASIA/CATV W EURO

Afghanistan, Albania, Algeria, Austria, Bahrain, Bangladesh, Belgium, Brunei, Canary Islands, Cyprus, Denmark, Egypt, Finland, Germany, Ghana, Gibraltar, Greece, Iceland, India, Indonesia, Iran, Iraq, Italy, Jordan, Kenya, Republic of Korea, Kuwait, Lebanon, Liberia, Libya, Luxembourg, Malaysia, Malta, Mauritania, Mauritius, Maldives Rep., Morocco, Mozambique, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Portugal, Qatar, Sarawak, Saudi Arabia, Seychelles, Sierra Leone, Singapore, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Rep., Tanzania, Thailand, Tunisia, Turkey, Uganda, United Arab Emirates, Western Sahara, Yemen Arab Republic, People's Dem. Rep. of Yemen, Yugoslavia, Zambia, Zimbabwe

AUSTRALIA

Australia, New Zealand

HK/UK

Hong kong, Ireland, Lesotho, South Africa, United Kingdom

CHINA/EURO

Benin, Bulgaria, China, Congo, Czechoslovakia, Djibouti Republic, Gabon, Guadeloupe, Guinea, Guinea (P.P.R.), Hungary, Ivory Coast, Dem. People's Rep. of Korea, Madagascar, Mongolia, New Caledonia, Niger, Poland, Reunion, Rumania, Senegal, Tahiti, Togo, Former U.S.S.R., Vietnam, Zaire

AMERICA/CATV AMERICA

Bahama Islands, Barbados, Belize, Bermuda, Bolivia, Burma (UHF), Canada, Chile, Colombia, Costa Rica, Cuba, Dominica Republic, Ecuador, El Salvador, Guam, Guatemala, Haiti, Hawaii, Honduras, Jamaica, Laos, Mexico, Panama, Peru, Philippines, Puerto Rico, Surinam, Taiwan, Trinidad & Tobago, U.S.A., U.S.A. (CATV), Venezuela

JAPAN

Burma (Myanmar) (VHF), Japan (VHF, UHF)

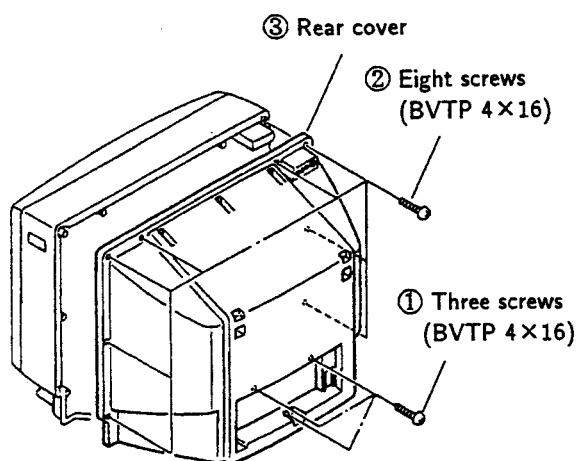
TV and color systems of each channel system

The TV system and color system are automatically set according to the channel system.

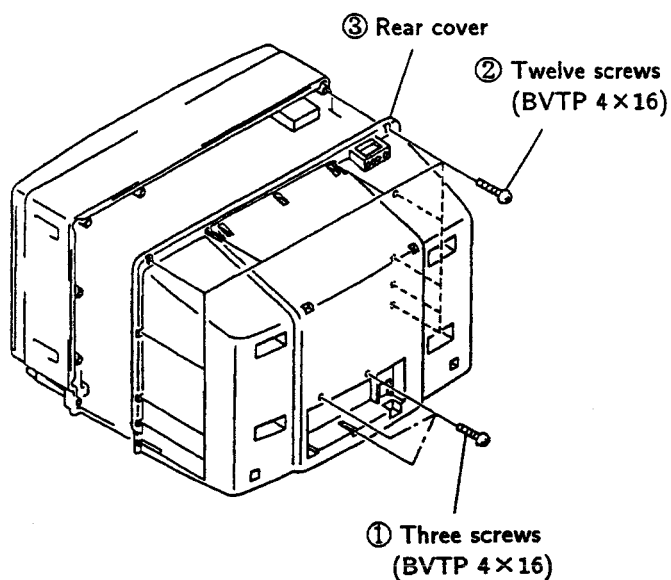
Channel system	TV system	Color system
M E/ASIA/ CATV W EURO	B/G, H: West European TV standard	AUTO
AUSTRALIA	B/G, H: Australian TV standard	AUTO
HK/UK	I: British TV standard	AUTO
CHINA/EURO	D/K: East European TV standard	AUTO
AMERICA/CATV AMERICA	M: American TV standard	AUTO
JAPAN	M: Japan TV standard	AUTO

SECTION 2 DISASSEMBLY

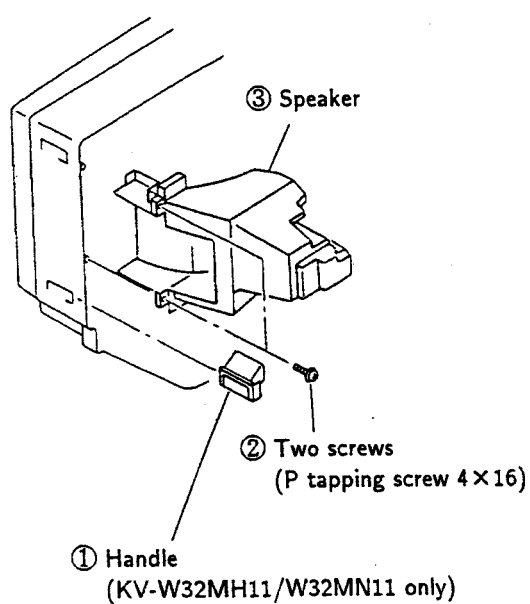
2-1-1. REAR COVER REMOVAL (KV-W28MH11/W28MN11 only)



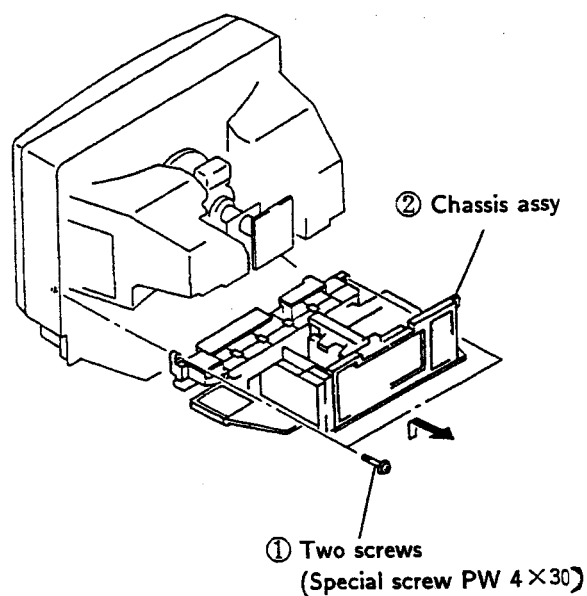
2-1-2. REAR COVER REMOVAL (KV-W32MH11/W32MN11 only)



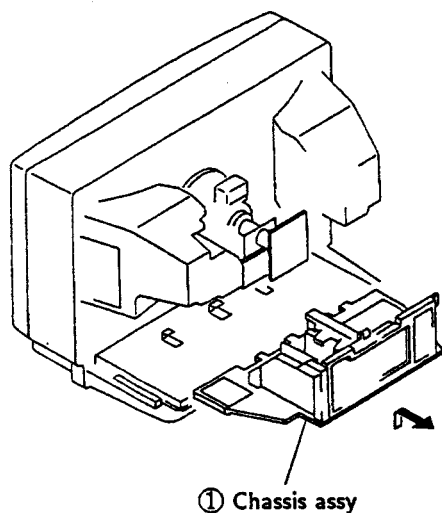
2-2. SPEAKER REMOVAL



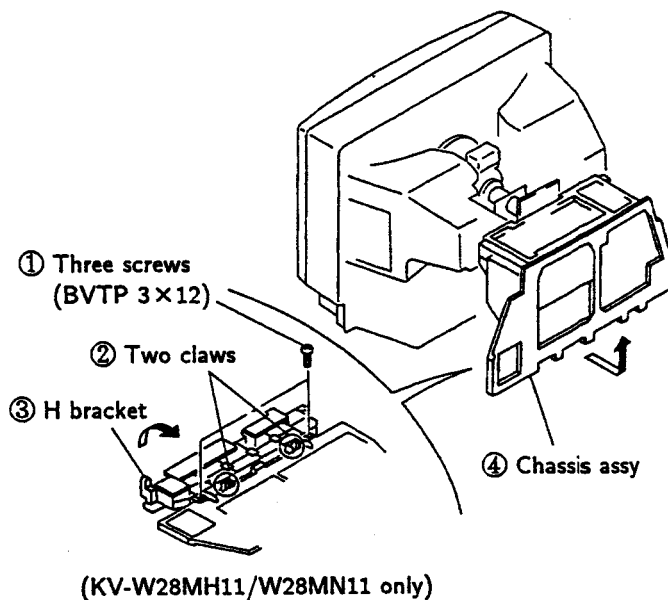
2-3-1. CHASSIS ASSY REMOVAL (KV-W28MH11/W28MN11 only)



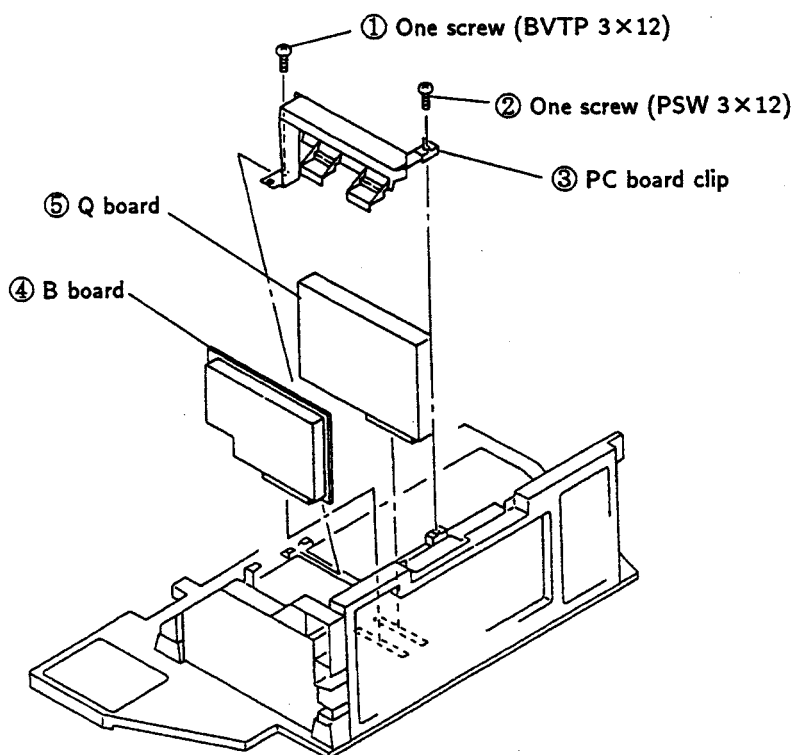
2-3-2. CHASSIS ASSY REMOVAL (KV-W32MH11/W32MN11 only)



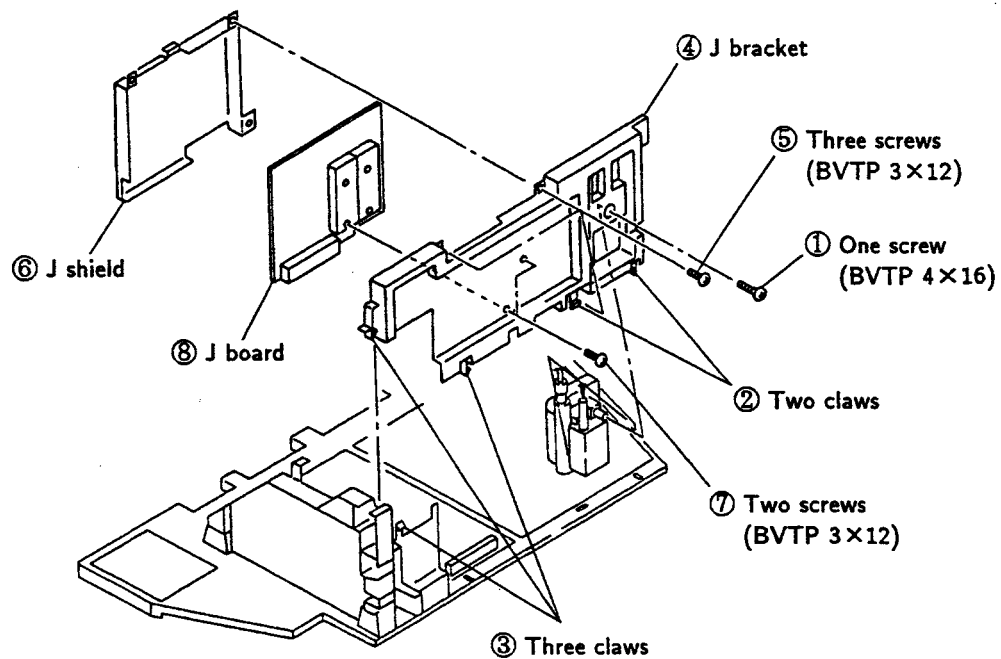
2-4. SERVICE POSITION



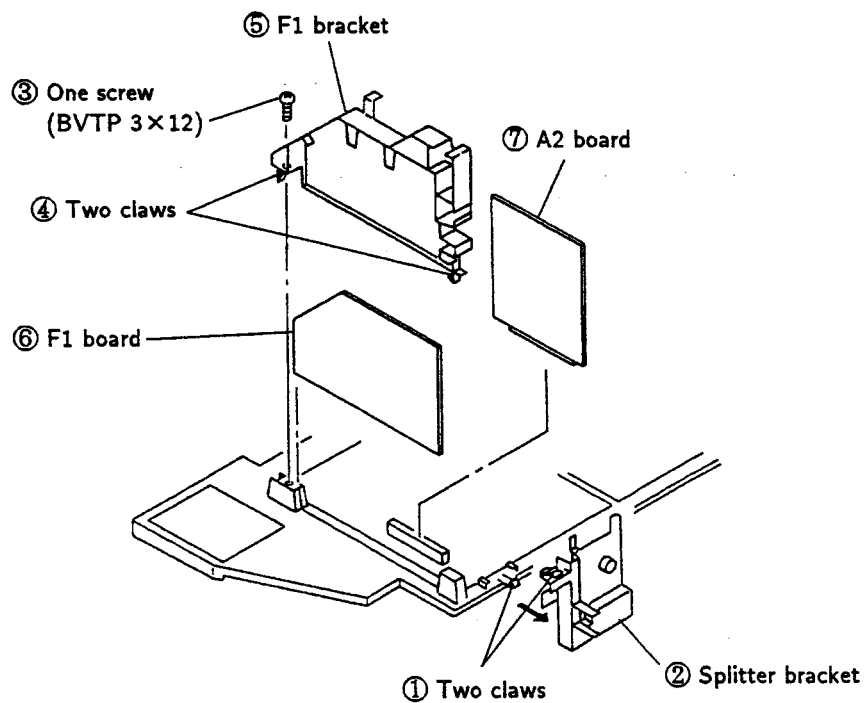
2-5. B AND Q BOARDS REMOVAL



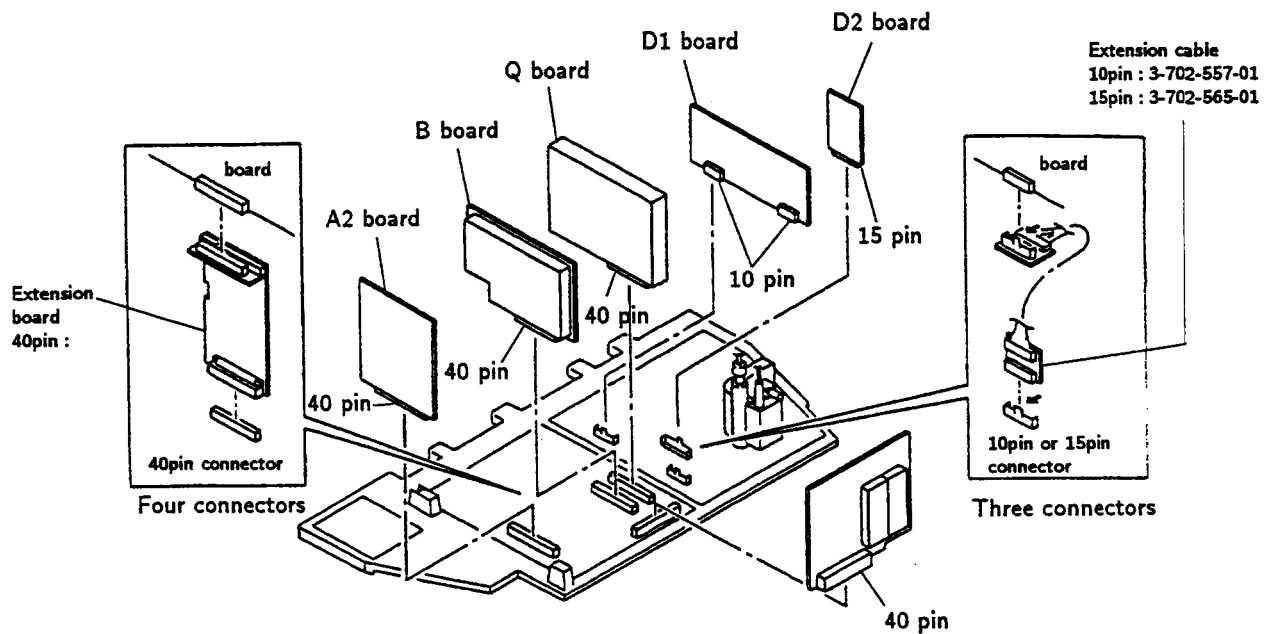
2-6. J BOARD REMOVAL



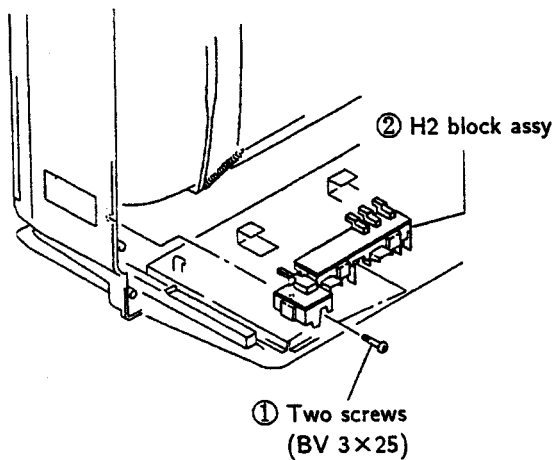
2-7. F1 AND A2 BOARDS REMOVAL



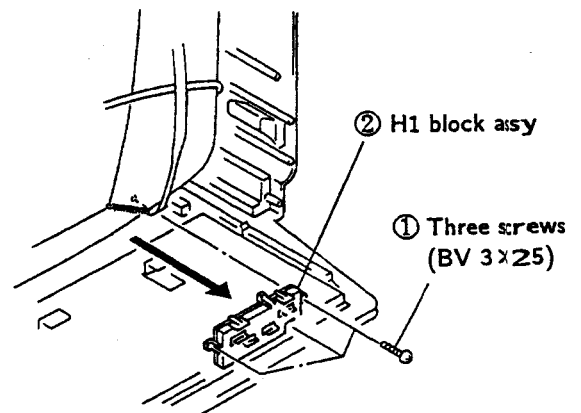
2-8. EXTENSION CABLE AND BOARD



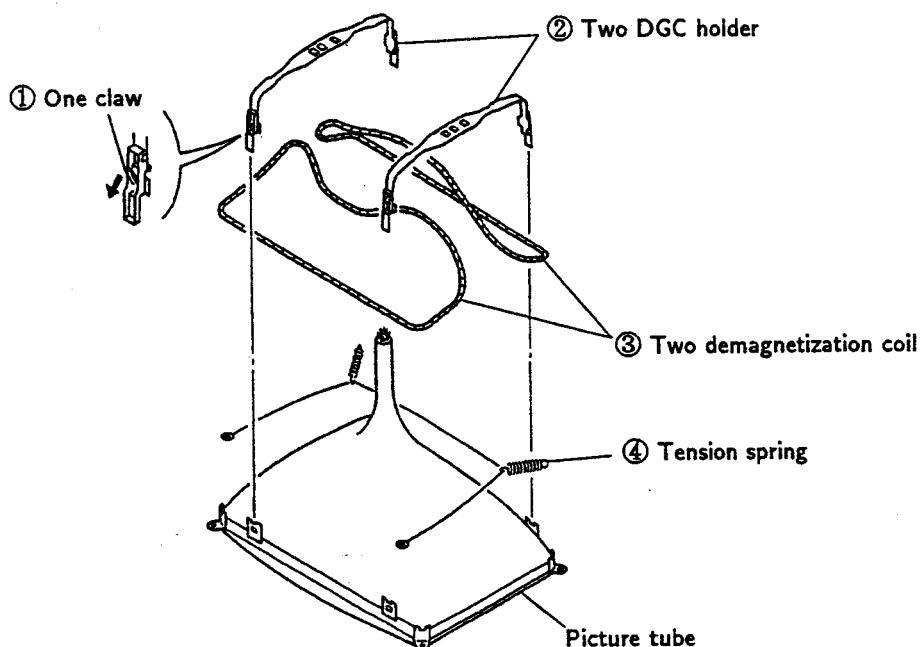
2-9. H2 BLOCK ASSY REMOVAL (KV-W32MH11/W32MN11 only)



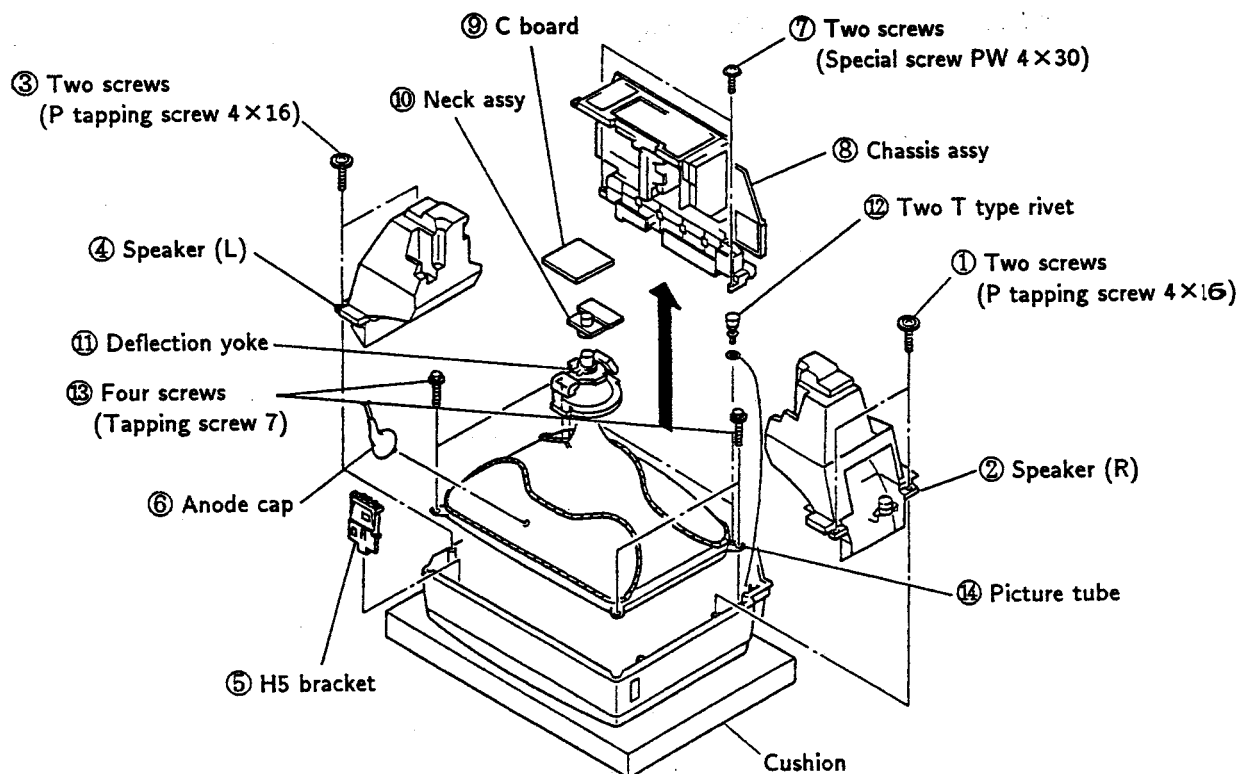
2-10. H1 BLOCK ASSY REMOVAL (KV-W32MH11/W32MN11 only)



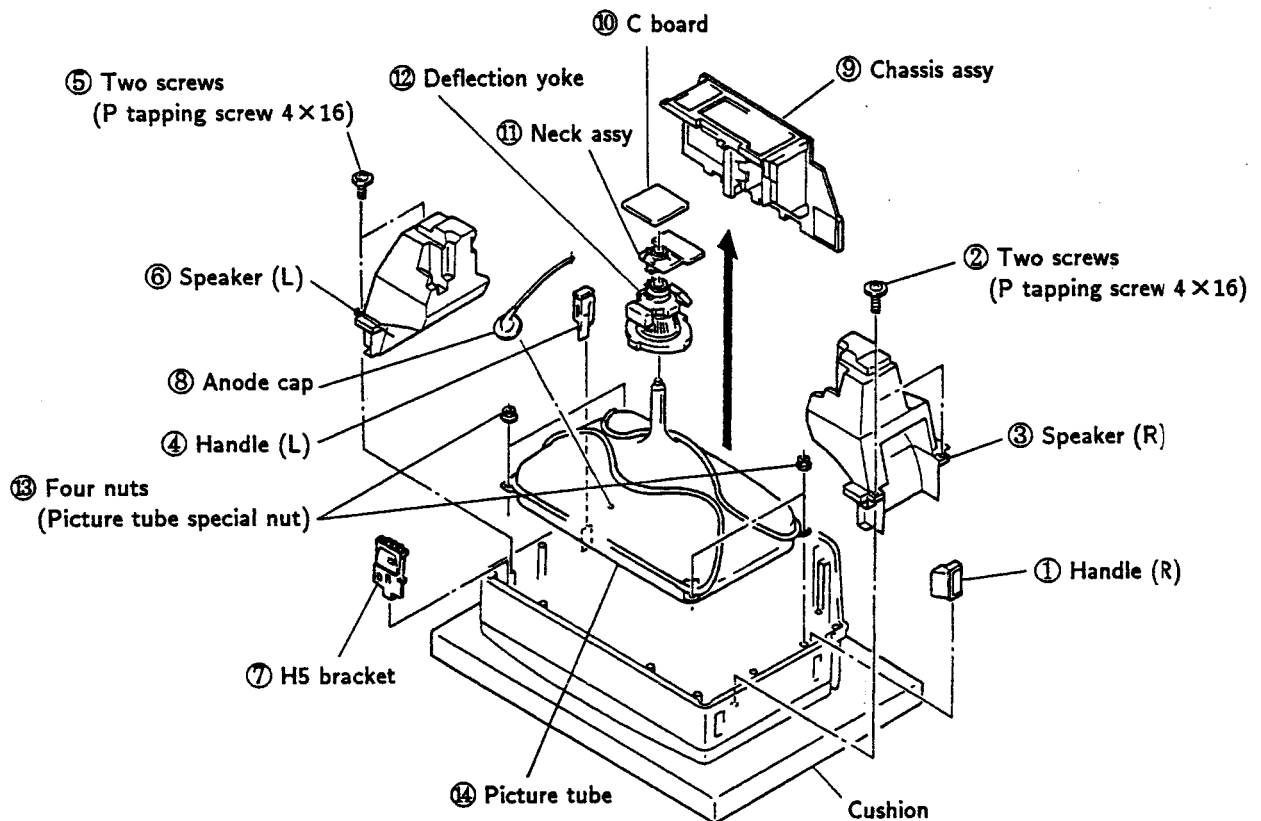
2-11. DEMAGNETIZATION COIL REMOVAL



2-12-1. PICTURE TUBE REMOVAL (KV-W28MH11/W28MN11 only)



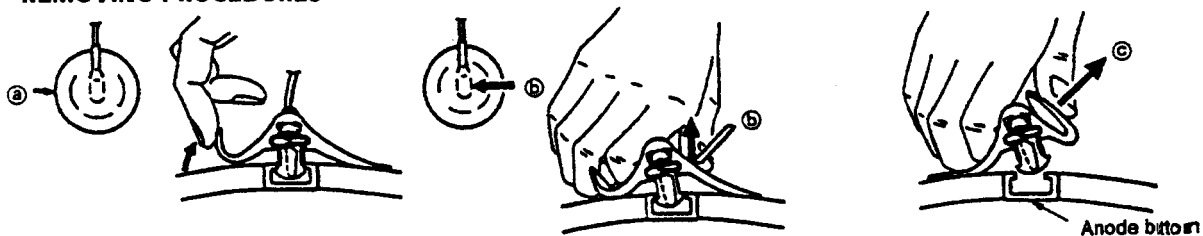
2-12-2. PICTURE TUBE REMOVAL (KV-W32MH11/W32MN11 only)



• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES



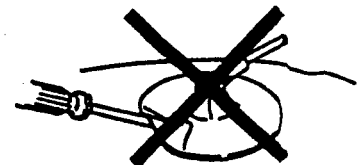
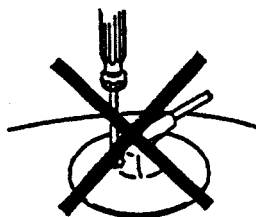
① Turn up one side of the rubber cap in the direction indicated by the arrow ①.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber too hard in order not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hard!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3 SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:

PICTURE control RESET
BRIGHTNESS control CENTER

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

3-1. BEAM LANDING

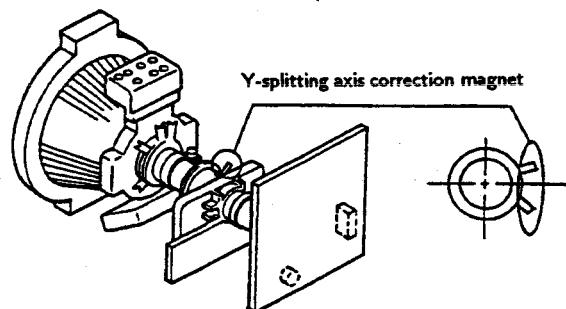
Preparations:

1. In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
2. Switch on the set's power and degauss with the degausser.

(1) Adjustment of Control Magnet for Y-Splitting Axis

1. Input a crosshatch signal with the pattern generator.
2. Picture control is minimum and brightness control is still normal.
3. Position the neck assy as shown in Fig.3-2.
4. Move the deflection yoke forward to touch the CRT and it stands up rightly.
5. Adjust the upper pin and the lower pin symmetrically by opening or closing the Y-splitting axis correction magnet on the neck assy.
6. Return the deflection yoke to original position.

7. Switch the raster signal to red, then to blue and verify the landing condition.
8. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
9. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig.3-4.)



(2) Landing

1. Input a full-white signal with the pattern generator. Maximize the picture setting and adjust the brightness setting for easy viewing.
2. Rough-adjust the focus, horizontal convergence.
3. Loosen the deflection yoke screws, align the purity adjustment knob to the central position. (See Fig.3-1.)
4. Switch the full-white signal to a mono-green signal.
5. Move the deflection yoke backward and adjust with the purity magnet so that the green is at the center and it aligns symmetrically. (See Fig.3-3.)
6. Move the deflection yoke forward and adjust so that entire screen is green.

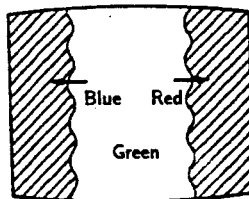
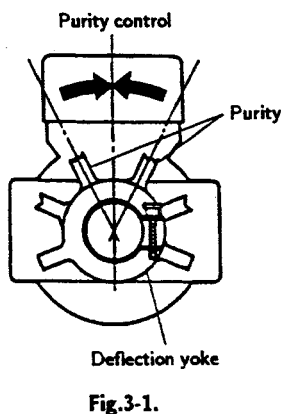


Fig.3-3.

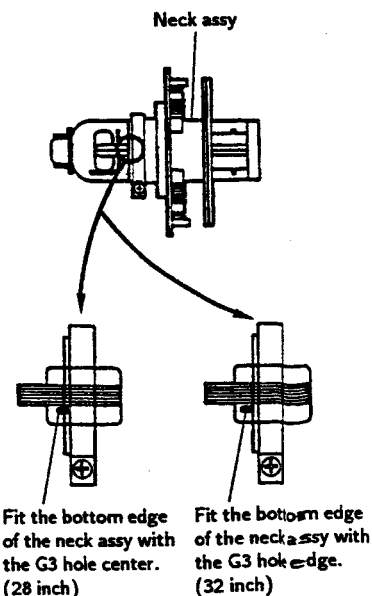


Fig.3-2.

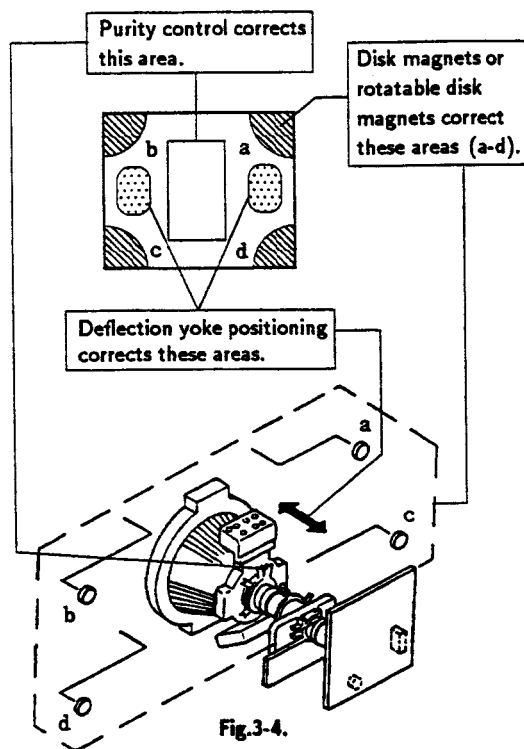


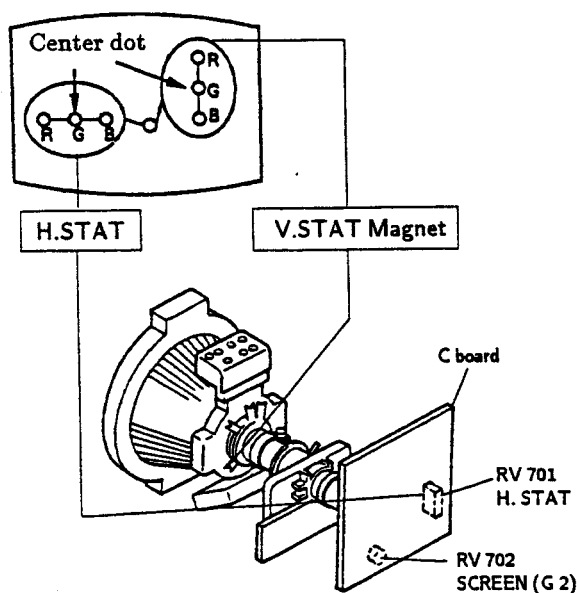
Fig.3-4.

3-2. CONVERGENCE

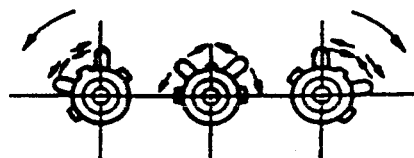
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

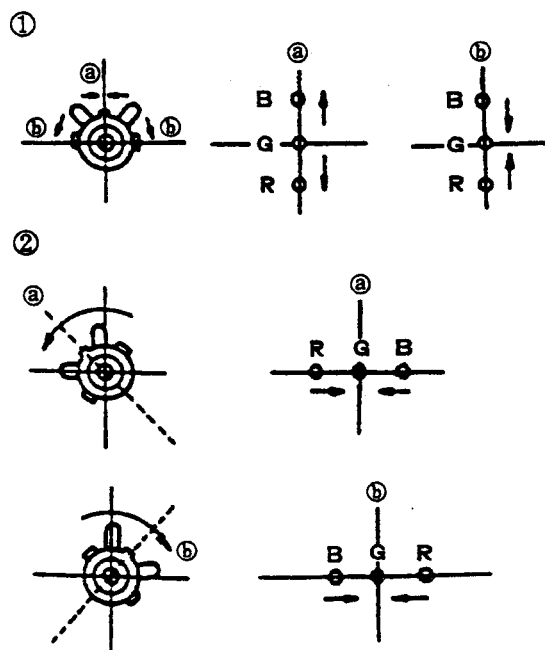
(1) Horizontal and Vertical Static Convergence

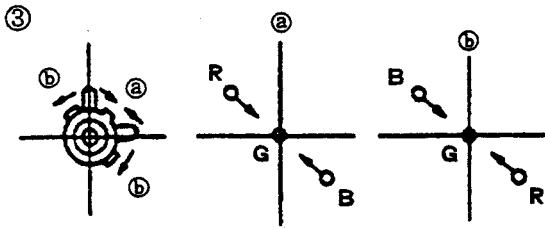


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H. STAT variable resistor and the V.STAT magnet in the manner given below. (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

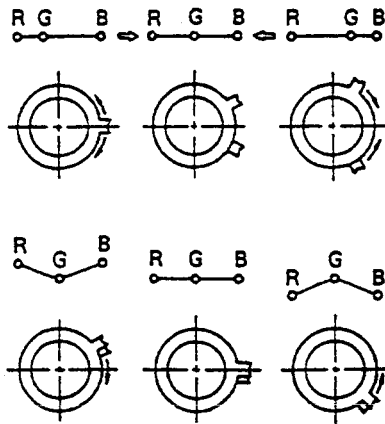


4. If the V.STAT magnet is moved in the direction of the ② and ③ arrows, the red, green, and blue points move as shown below.



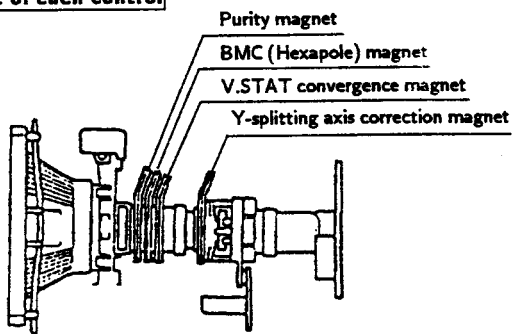


• Operation of BMC (Hexapole) Magnet



- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

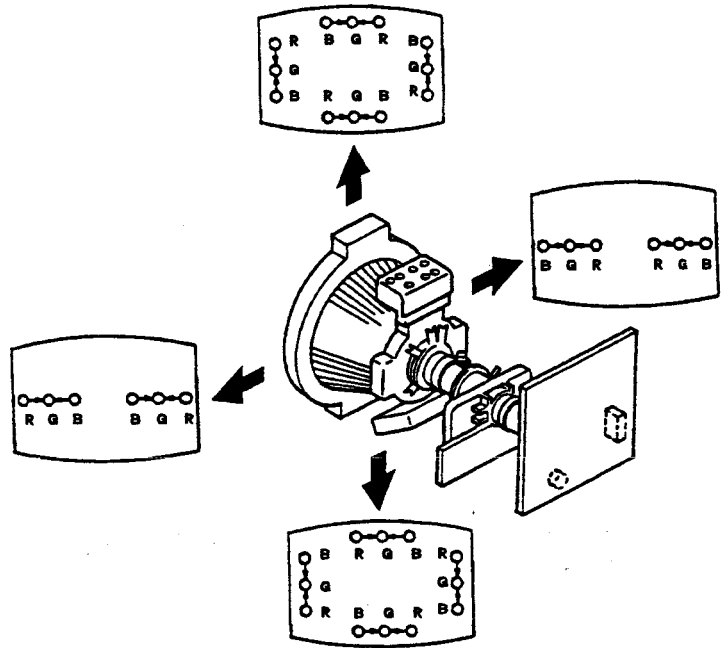
Layout of each control



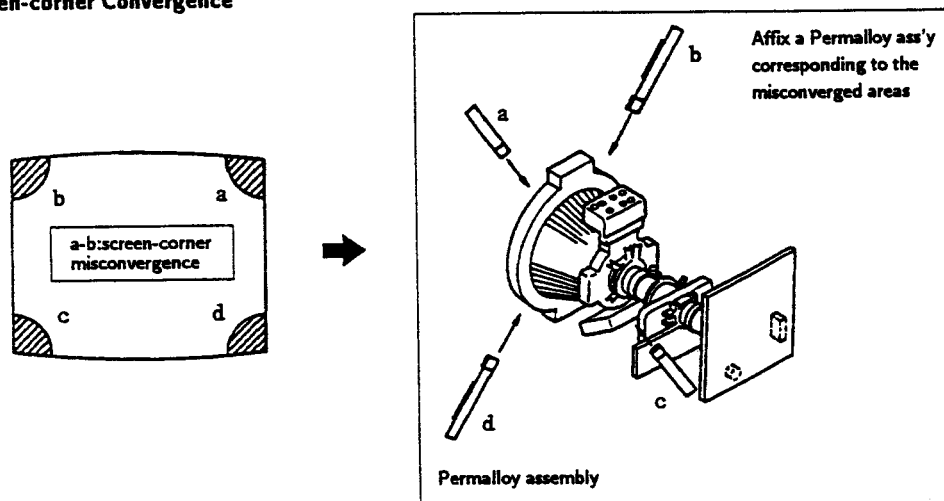
(2) Dynamic Convergence Adjustment

Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
1. Slightly loosen the deflection yoke screws.
 2. Remove the deflection yoke spacer.

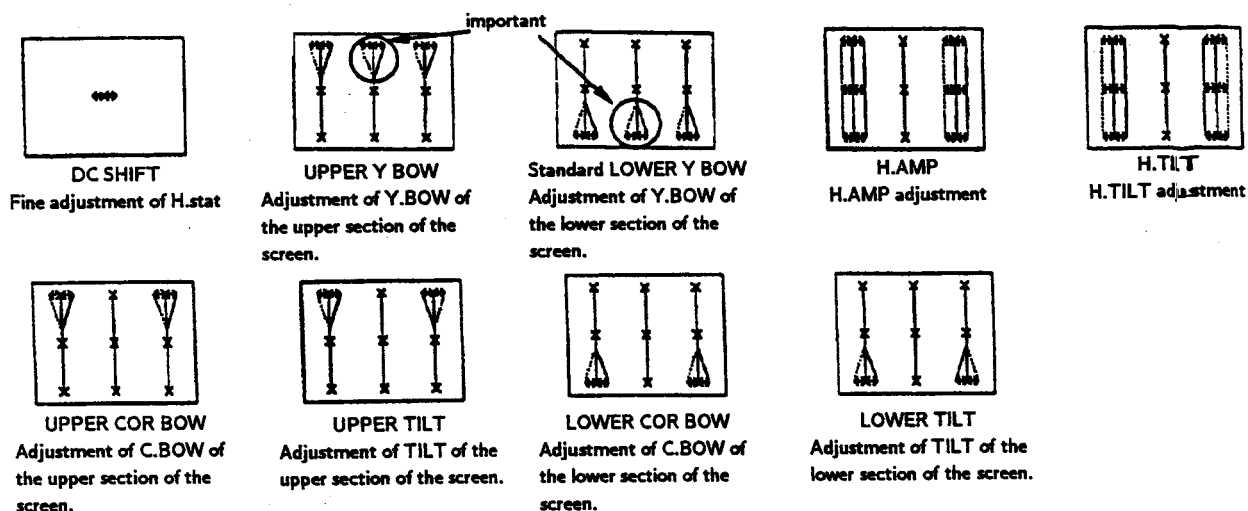


(3) Screen-corner Convergence



Item number	Adj. Item	Data range	Standard DATA										Note	Device
			W 5	W 6	Z 5	Z 6	S 5	S 6	No/Fu 5	No/Fu 6	MP			
37	DCS	00~3F						1 F				DC Shift	(CXA 1526 P)	
38	HAP	00~3F						1 F				H. Amp	(CXA 1526 P)	
39	HTL	00~3F						1 F				H. Tilt	(CXA 1526 P)	
3A	UYB	00~3F						1 F				Upper Y Bow	(CXA 1526 P)	
3B	LYB	00~3F						1 F				Lower Y Bow	(CXA 1526 P)	
3C	UCB	00~3F						1 F				Upper Corner Bow	(CXA 1526 P)	
3D	UTL	00~3F						1 F				Upper Tilt	(CXA 1526 P)	
3E	LCB	00~3F						1 F				Lower Corner Bow	(CXA 1526 P)	
3F	LTL	00~3F						1 F				Lower Tilt	(CXA 1526 P)	

R.G.B.dots movement on the screen of the set



At this time, H.TILT, H.AMP, UPPER TILT, UPPER COR, BOW, LOWER TILT, and LOWER COR, BOW look like all the same, but the movement of the right and left dots are reverse in all the TILT system. (Pay attention to the dotted lines.)

(4) Dynamic convergence adjustment

1. Adjust horizontal convergence located at the center position of the screen with H STAT VR.
2. Dynamic convergence adjustments are made with the RM-850 that comes with this unit.

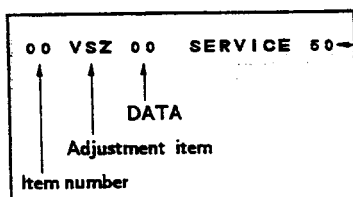
Entering service mode

With the unit on standby

↓
"DISPLAY"
↓
"5"
↓
"VOL (+)"
↓
"POWER"

This operation sequence puts the unit into service mode.

The screen display



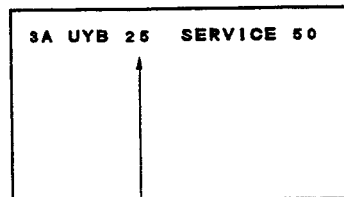
Depends on the signals.
PAL, SECAM : 50
NTSC : 60

"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTE"	Writes
"0"	Executes the writing

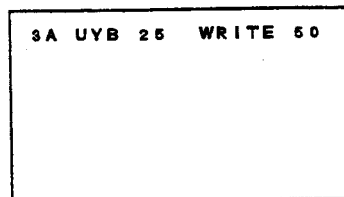
Item Number 3A

This explanation uses UYBOW as an example.

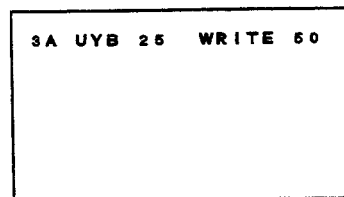
1. Select 3A UYBOW with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state.
4. Write with the MUTE button. (The display changes to WRITE.)
5. Execute the writing with the "0" button.



Adjusted with "3" and "6" buttons



Written with "MUTE"

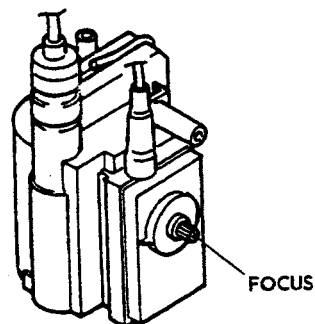


Write executed with "0"

"1", "4"	Select the adjustment item.
↓	
"3", "6"	Raise/lower the data.
↓	
"MUTE"	Writes.
↓	
"0"	Executes the writing.

3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.

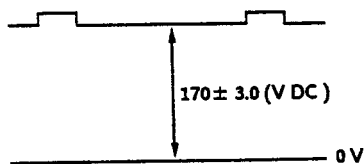


FLYBACK TRANSFORMER (T503)

3-4. G2 (SCREEN), SUB PICTURE AND WHITE BALANCE ADJUSTMENTS

(1) G2 (SCREEN) ADJUSTMENT (RV701)

1. Set the PICTURE and BRIGHTNESS to normal.
2. Put to VIDEO input mode without signals.
3. Set to Service Mode. (To turn off Blue Black.)
4. Change BOF data of the item number "1A" from "00" to "01".
5. Connect R, G, and B of the C board cathode to the oscilloscope.
Adjust R-G, G-G, B-G, data of the item number "0 E", "0 F", "10" to the value below.



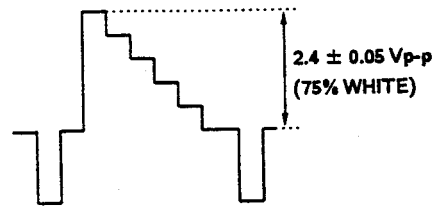
6. Adjust G2 (RV701) volume to make the screen slightly bright.

(2) SUB PICTURE ADJUSTMENT (R-G)

1. Receive a NTSC color-bar (75% WHITE) to set to FULL mode.
2. Set the conditions as follows.

SHARPNESS	.....	minimum	
PICTURE	.....	maximum	
COLOR	.....	minimum	
BRIGHT	.....	50%	
SUB BRIGHT	.....	1 F	} DATA
SUB PICTURE	.....	18	

3. Connect an oscilloscope to the pin⑥ (R OUT) of CN 508, D board.
4. Set to Service Mode.
5. Select 0F (G-G) and 10 (B-G) with [1] and [4] of the commander and set the data "00" with [3] and [6].
6. Select 0E (R-G) with [1] and [4], and adjust [3] and [6] to get 2.4 ± 0.05 Vp-p level.
7. Press [MUTING] → [0] of the commander to write the data.

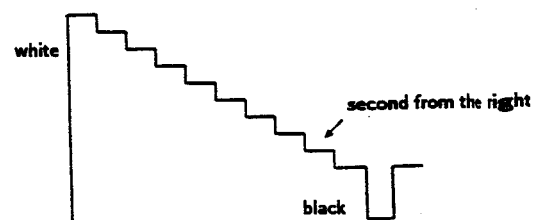


(3) WHITE BALANCE ADJUSTMENTS

1. Input an entire white signal.
2. Set to service mode.
3. Set the PICTURE to maximum.
4. Select G-G (0F) and B-G (10) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5. Set the PICTURE to minimum.
6. Adjust the level with RV705 (B.BKG) and RV704 (G.BKG) for the best white balance.
7. Write into the memory by pressing [MUTE] → then [0].

(4) SUB BRIGHT ADJUSTMENT

1. Set to service mode.
2. Input a staircase signal of black and white from the pattern generator.
3. BRIGHTNESS ... 50%
PICTURE minimum
4. Select SBT with [1] and [4], and adjust SBT (24) level with [3] and [6] so that the stripe second from the right is dimly lit.



SECTION 4 CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-850 that comes with this unit.

Entering service mode

With the unit on standby

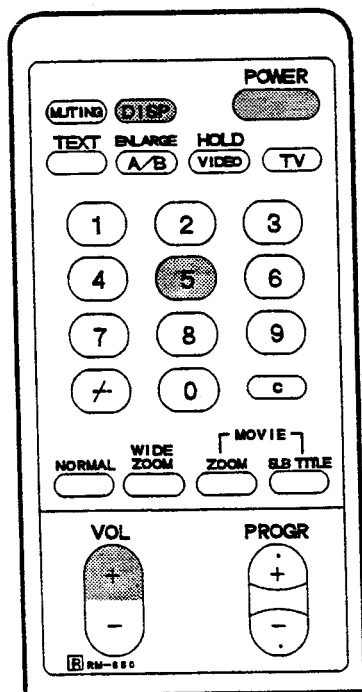
↓
"DISPLAY"

↓
"5"

↓
"VOL (+)"

↓
"POWER"

This operation sequence puts the unit into service mode.

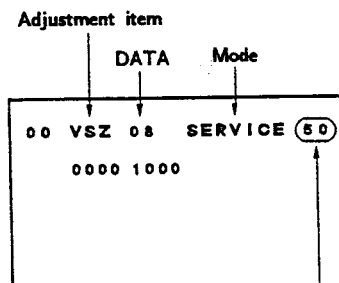


RM-850

"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTE"	Writes
"0"	Executes the writing

"7", "0"	The data all becomes the values in memory
"8", "0"	User control all goes to the standard state
"5", "0"	Service data initialization (Besure not to use usually.)
"DISP", "0"	Write 50Hz adjustment data to 60Hz, or vice versa.
"2", "0"	Data copy of all WIDE modes.

The screen display is :



Depends on the signals
PAL, SECAM : 50
NTSC : 60

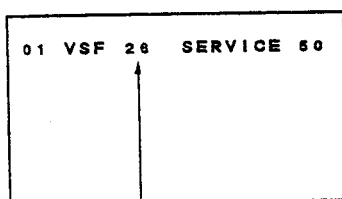
"1", "4"	Select the adjustment item.
↓	
"3", "6"	Raise/lower the data.
↓	
"MUTE"	Writes
↓	
"0"	Executes the writing.

4-2. ADJUSTMENT METHOD

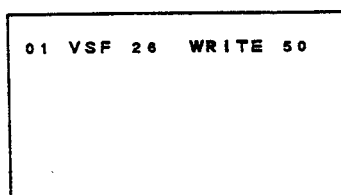
Item Number 01

This explanation uses V-SHFT as an example.

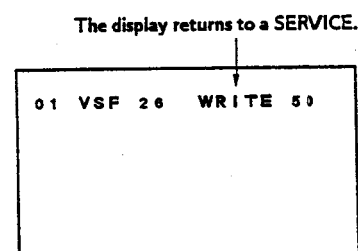
1. Select 01 V-SHFT with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state. (The standard setting is for PAL reception.)
4. Write with the MUTE button. (The display changes to WRITE.)
5. Execute the writing with the "0" button.



Adjusted with "3" and "6" buttons



Written with "MUTE"



Write executed with "0"

Item number	Adjustment Item	Data range	Standard DATA										Note	Device
			W5	W6	Z5	Z6	S5	S6	No/Fu5	No/Fu6	MP			
00	VSZ	00~3F						30					V-Size	CXD2018Q
01	VSF	00~3F						26					V-Shift	
02	SCR	00~0F						04					S-Correction	
03	VLN	00~0F						09					V-Linearity	
04	HSZ	00~3F						2A					H-Size	
05	PAP	00~3F						20					Pin-Amp	
06	TLT	00~1F						10					TILT	
07	UCP	00~0F						07					Upper Corner Pin	
08	LCP	00~0F						06					Lower Corner Pin	
09	VBW	00~0F						08					V-Bow	
0A	VAG	00~0F						08					V-Angle	
0B	HVV	00~07						05					HV-Comp-V	
0C	HVH	00~07						00					HV-Comp-H	
			W5	W6	Z5	Z6	S5	S6	N5	N6	F5	F6	MP	
0D	HSB	00~3F						20					H Shift	

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

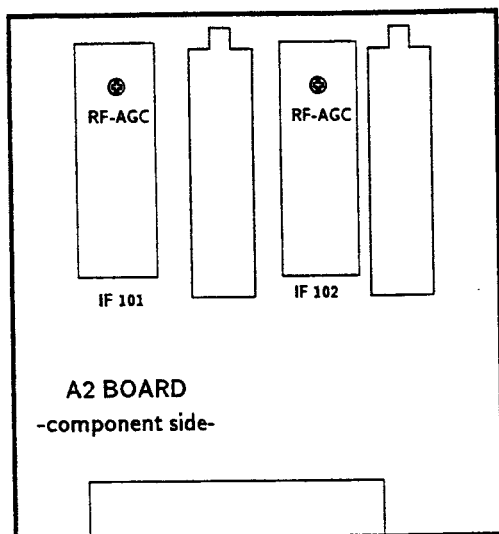
Item number	Adjustment Item	Data range	Standard DATA	Note	Device
0E	R-G	00~3F	1F	Red Gain	TDA4780/ TDA4686
0F	G-G	00~3F	1F	Green Gain	
10	B-G	00~3F	1F	Blue Gain	
11	RLR	00~3F	1F	Red Level Ref.	
12	GLR	00~3F	1F	Green Level Ref.	
13	BLR	00~3F	1F	Blue Level Ref.	
14	PDL	00~3F	29	Peak Drive Limit	
15	GMM	00~3F	1F	γ	
16	SC5	00~01	01	Sand Castle 5 V	
17	DOF	00~01	00	Delay Lead Edge	
18	HD	00~01	00	HDTV/Progressive	
19	FLB	00~01	00	Screen Black	
1A	BOF	00~01	00	Auto Cut-OFF OFF	
1B	ADB	00~01	01	Adaptive Black	
1C	YH1	00~01	00	Y High Level	
1D	MD2	00~01	00	Modus 2	
1E	BLS	00~01	00	BLST	
1F	YEX	00~01	01	Y Exclusive Hue	
20	RLC	00~01	00	Rel. to CutOff	
21	TCP	00~01	01	Time Const. Peak	
			<u>Wide Zoom, Zoom, Subtitle, Full, MP : Normal</u>		
22	SPI	00~1F	0F	Sub Picture	
23	SCO	00~3F	1F	Sub Color	
24	SBT	00~7F	1F	Sub Bright	
25	SHU	00~1F	0F	Sub Hue	TDA9145
26	SHS	00~1F	0F	Sub Hue S&PinP	
27	CV	00~01	00	Forced CVBS	
28	FON	00~01	01	Frame ON	SDA9188-3X
29	DLY	00~07	00	Sel.Delay LL 3 P	
2A	P-V	00~0F	08	V read delay	
2B	PVS	00~07	01	PIP-V offset	
2C	P-H	00~3F	0A	H read delay	
2D	PHS	00~0F	02	PIP-H offset	
2E	CTR	00~0F	09	Contrast	
2F	DVI	00~1F	07	Set Delay VSI	
30	DVP	00~1F	0F	Delay VSP Pulse	
31	BRT	00~0F	05	Frame Brightness	
32	PLL	00~01	00	PLL Time Const.	
33	9V5	00~07	03	Multi PiP V 50 Hz	
34	9V6	00~07	03	Multi PiP V 60 Hz	
35	9H5	00~07	03	Multi PiP H 50 Hz	
36	9H6	00~07	03	Multi PiP H 60 Hz	
			<u>W5 W6 Z5 Z6 S5 S6 No/Fu5 No/Fu6 MP</u>		
37	DCS	00~3F	1F	DC Shift	CX1526P
38	HAP	00~3F	1F	H.Amp	
39	HTL	00~3F	1F	H.Tilt	
3A	UYB	00~3F	1F	Upper Y bow	
3B	LYB	00~3F	1F	Lower Y Bow	
3C	UCB	00~3F	1F	Upper Corner Bow	
3D	UTL	00~3F	1F	Upper Tilt	
3E	LCB	00~3F	1F	Lower Corner Bow	
3F	LTL	00~3F	1F	Lower Tilt	

Item number	Adjustment Item	Data range	Standard DATA	Note	Device
			W5 W6 Z5 Z6 S5 S6 N5 N6 F5 F6		
40	107	00~01	00	Set TMS4C1070	IPQ V3, 4 (F/F)
41	P27	00~01	00	PLLMD Port P27	
42	LFR	00~01	01	LFR ON/OFF	
43	HWE	00~0F	0B	HWE1 Line Delay	
44	NR	00~03	01	Noise Reduction	
45	STP	00~01	00	Still Picture	
			W5 W6 Z5 Z6 S5 S6 No/Fu 5 No/Fu 6		
46	VWD	00~3F	Invalid 1 A Invalid	Scroll	
47	Y-V	00~FF	00	Y Value	
48	UVV	00~FF	00	UV Value	
49	TXH	00~FF	05	Text H Position	TPU3040 (Text)
4A	TXV	00~3F	16	Text V Position	
4B	VSP	00~FF	3B	WST Layer V Stop	
4C	BSP	00~FF	3D	Blanking Stop	
4D	BST	00~FF	35	Blanking Start	
4E	QSF	00~1F	01	ACQ Soft Slicer	
4F	A7F	00~FF	0A	Address 7FH Data	
50	QDT	00~3F	0D	ACQ Data Slicer	
51	CST	00~FF	00	Clamping Start	
52	CSP	00~FF	50	Clamping Stop	
53	FAW	00~FF	0A	NICAM FAW Thresh	MSP3410 (Audio, Stereo)
54	CCT	00~FF	0A	NICAM Error Bit	
55	WLO	00~FF	0A	W.G.	
56	WHI	00~FF	15	W.G.Stereo cut point	
57	WML	00~FF	50	W.G. timer	
58	WMH	00~FF	EA	W.G.Bilin cut point	
59	ACG	00~01	01	AGC Auto/Const.	
5A	CDB	00~7F	50	AGC Gain Const.	
5B	FMP	00~7F	24	FM Mono Prescale	
5C	WGP	00~7F	3C	W.G. Prescale	
5D	NIP	00~7F	7F	NICAM Prescale	
5E	CRM	00~01	00	Carrier Mute	
5F	ACO	00~01	01	Audio Clock Out	
60	OSH	00~3F	06	OSD Position H	CXP85340A
61	ODL	00~FF	10	Power ON Delay	
62	BLU	00~01	01	Blue Back	
63	ROS	00~3F	3F	N/S User Step	
64	MUT	00~01	01	No Sync. Mute	
65	DID	00~01	00	disable Degauss	
66	DWZ	00~01	00	User Last Wide	
67	OP0	00~FF	6C	Option 0	
68	OP1	00~FF	01	Option 1	

Note : • W5 : Wide Zoom 50Hz
• W6 : Wide Zoom 60Hz
• Z5 : Zoom 50Hz
• Z6 : Zoom 60Hz
• S5 : Subtitle50Hz
• S6 : Subtitle60Hz

• N5 : Normal 50Hz
• N6 : Normal 60Hz
• F5 : Full 50Hz
• F6 : Full 60Hz
• MP : Multi PinP

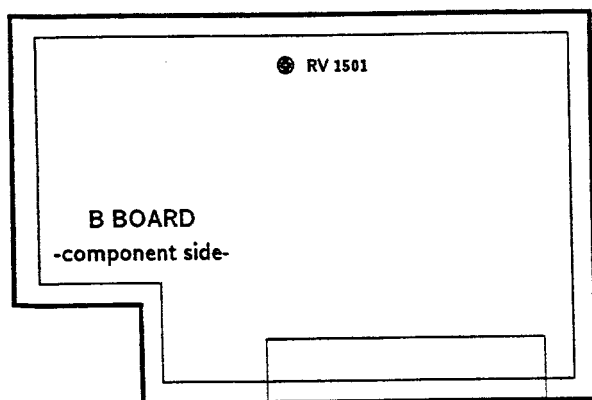
4-3. A2 BOARD ADJUSTMENT



AGC ADJUSTMENT (IF BLOCK)

1. Receive an off-air signal.
2. Adjust the AGC VR (IF101) so that there is no snow noise and cross-modulation.
3. Set to PIP mode. (only 32 inch)
4. Receive an off-air signal with the sub picture.
5. Adjust the AGC VR (IF102) so that there is no snow noise and cross-modulation.

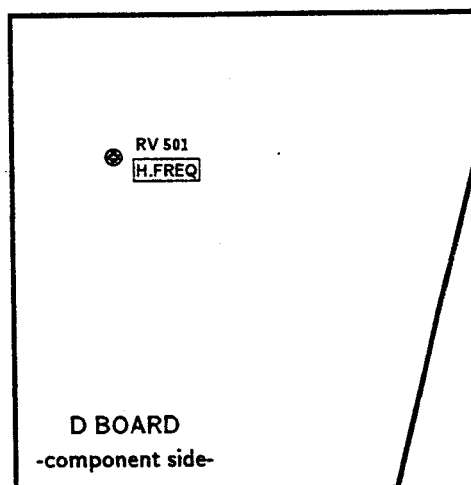
4-4. B BOARD ADJUSTMENT



SCP F0 ADJUSTMENT (RV1501)

1. Receive a PAL color-bar signal.
2. Connect an oscilloscope to the pin ⑧ of IC501.
3. Adjust RV1501 for 2.8~2.9 V.

4-5. D BOARD ADJUSTMENT



H. FREQ ADJUSTMENT (RV501)

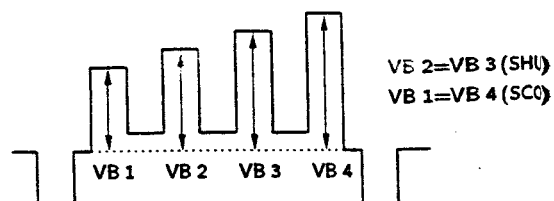
1. Receive a PAL color-bar signal.
2. Short the ground and pin ① of IC502.
3. Connect a frequency counter to the pin ⑫ of IC502.
4. Adjust RV501 for 31.4 ± 0.1 kHz.
5. Disconnect a jumper wire from IC502.

SUB HUE, SUB COLOR ADJUSTMENT (SHU, SCO)

1. Receive a NTSC color-bar to set to FULL mode.
2. Set the conditions as follows.

PICTURE	.....	80%
COLOR	.....	50%
HUE	.....	50%

3. Connect an oscilloscope to the pin ⑦ (B OUT) of CN508, D board.
4. Set to Service Mode.
5. Select 25 (SHU) and 23 (SCO) with [1] and [4], and adjust [3] and [6] to get $VB2=VB3$ and $VB1=VB4$.
6. Press [MUTING] → [0] of the commander to write the data.

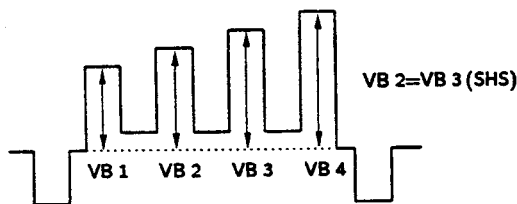


SUB HUE S ADJUSTMENT (SHS)

1. Receive a S video NTSC color-bar to set to FULL mode.
2. Set the conditions as follows.

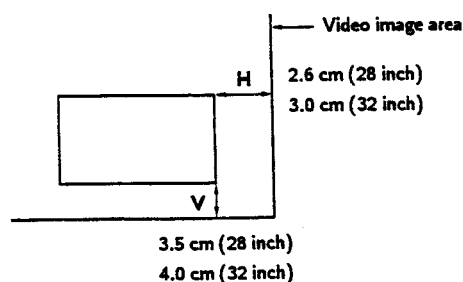
PICTURE	.....	80%
COLOR	.....	50%
HUE	.....	50%

3. Connect an oscilloscope to the pin ⑦ (B OUT) of CN 508, D board.
4. Set to Service Mode.
5. Select 26 (SHS) with [1] and [4], and adjust [3] and [6] to make VB2=VB3.
6. Press [MUTING] → [0] of the commander to write the data.



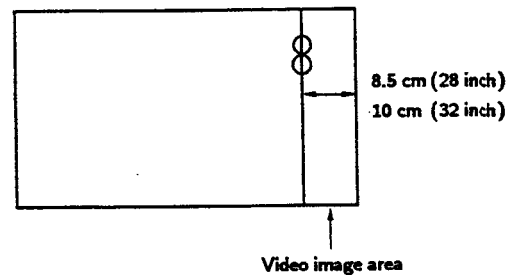
WINDOW PICTURE POSITION ADJUSTMENT (PVS, PHS)

1. Receive a PAL SP color-bar to set to FULL mode.
2. Set to Service Mode.
3. Press [MENU] button of the commander for P in P mode. (RIGHT, LOWER position)
4. Select 2A (P-V) or 2B (PVS) and 2C (P-H) or 2D (PHS) with [1] and [4].
Then adjust them respectively, with [3] and [4], to 3.5 cm (28 inch) or 4.0 cm (32 inch), and 2.6 cm (28 inch) or 3.0 cm (32 inch).
5. Press [MUTING] → [0] of the commander to write the data.



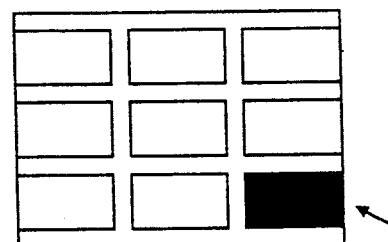
PROGRAM POSITION ADJUSTMENT (OSH)

1. Receive a PAL color-bar to set to FULL mode.
2. Set to Service Mode.
3. Press [DISP] button of the commander.
4. Select 60 (OSH) with [1] and [4] of the commander, and set the position as shown below with [3] and [6].
5. Press [MUTING] → [0] of the commander to write the data.



MULTI PIP ADJUSTMENT (9V5, 9V6, 9H5, 9H6)

1. Receive a NTSC monoscope to set to FULL mode.
2. Set to Service Mode.
3. Press [MENU] button of the commander for STROBE mode. (RIGHT, LOWER position)
4. Select 34 (9V6) and 36 (9H6) with [1] and [4], and adjust [3] and [6] to set the monosco pattern at the frame center.
5. Press [MUTING] → [0] of the commander to write the data.
6. Receive a PAL monoscope to set to FULL mode.
7. Press [MENU] button of the commander for STROBE mode. (RIGHT, LOWER position)
8. Select 33 (9V5) and 35 (9H5) with [1] and [4], and adjust [3] and [6] to set the monosco pattern at the frame center.
9. Press [MUTING] → [0] of the commander to write the data.



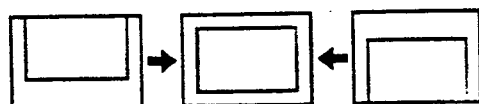
4-6. PICTURE DISTORTION ADJUSTMENT

Item Numbers 23-2D

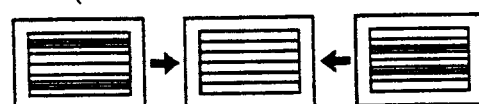
00 VSZ (V SIZE)



01 VSF (V SHIFT)



02 SCR (VERTICAL S correction)



03 VLN (V LINEARITY)



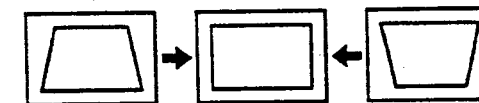
04 HSZ (H SIZE)



05 PAP (PIN AMP)



06 TLT (TILT)



07 UCP (Upper Corner Pin)

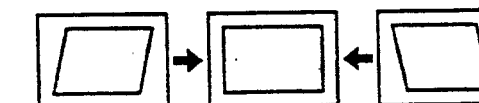
08 LCP (Lower Corner Pin)



09 VBW (V-BOW)



0A VAG (V-ANGLE)

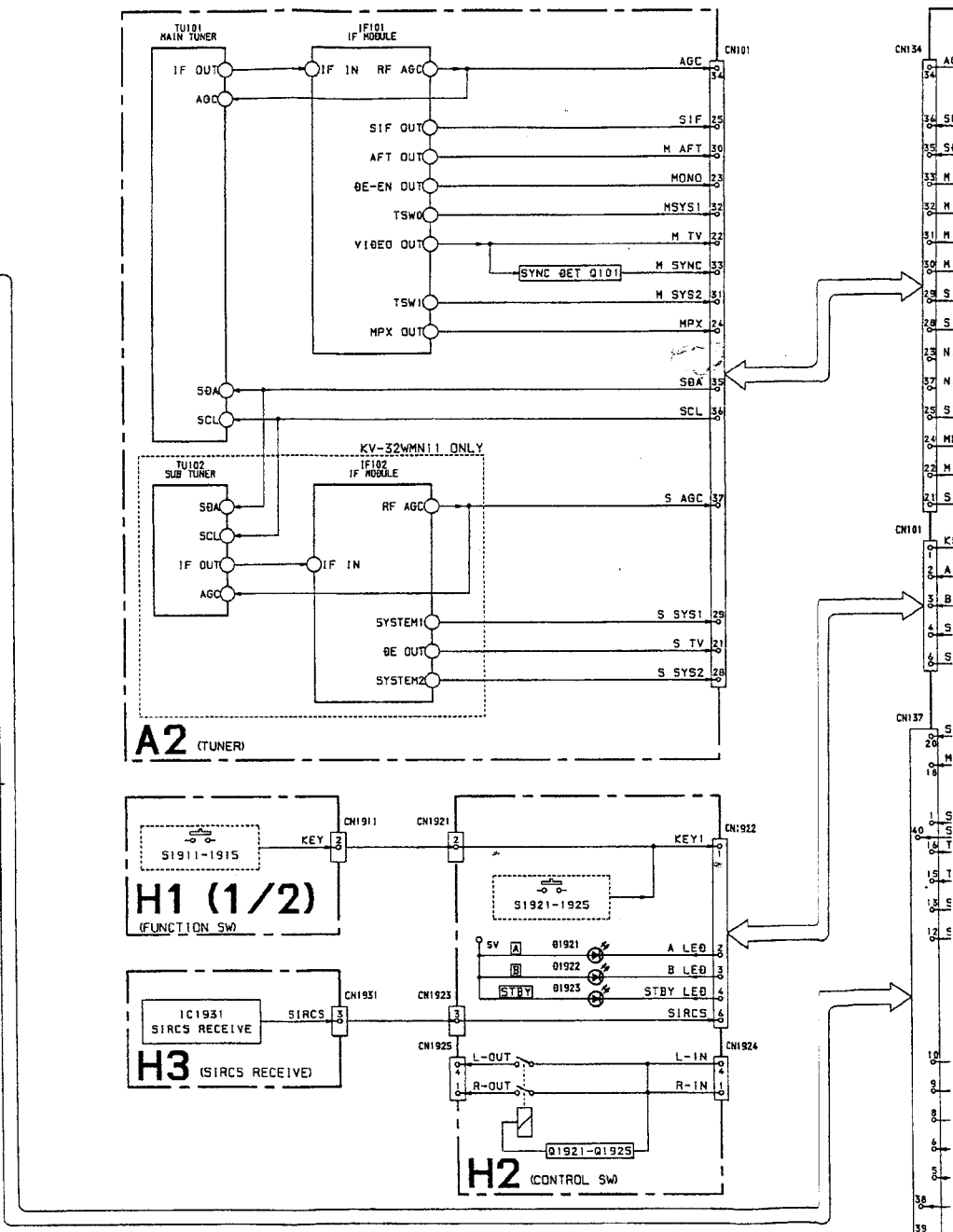
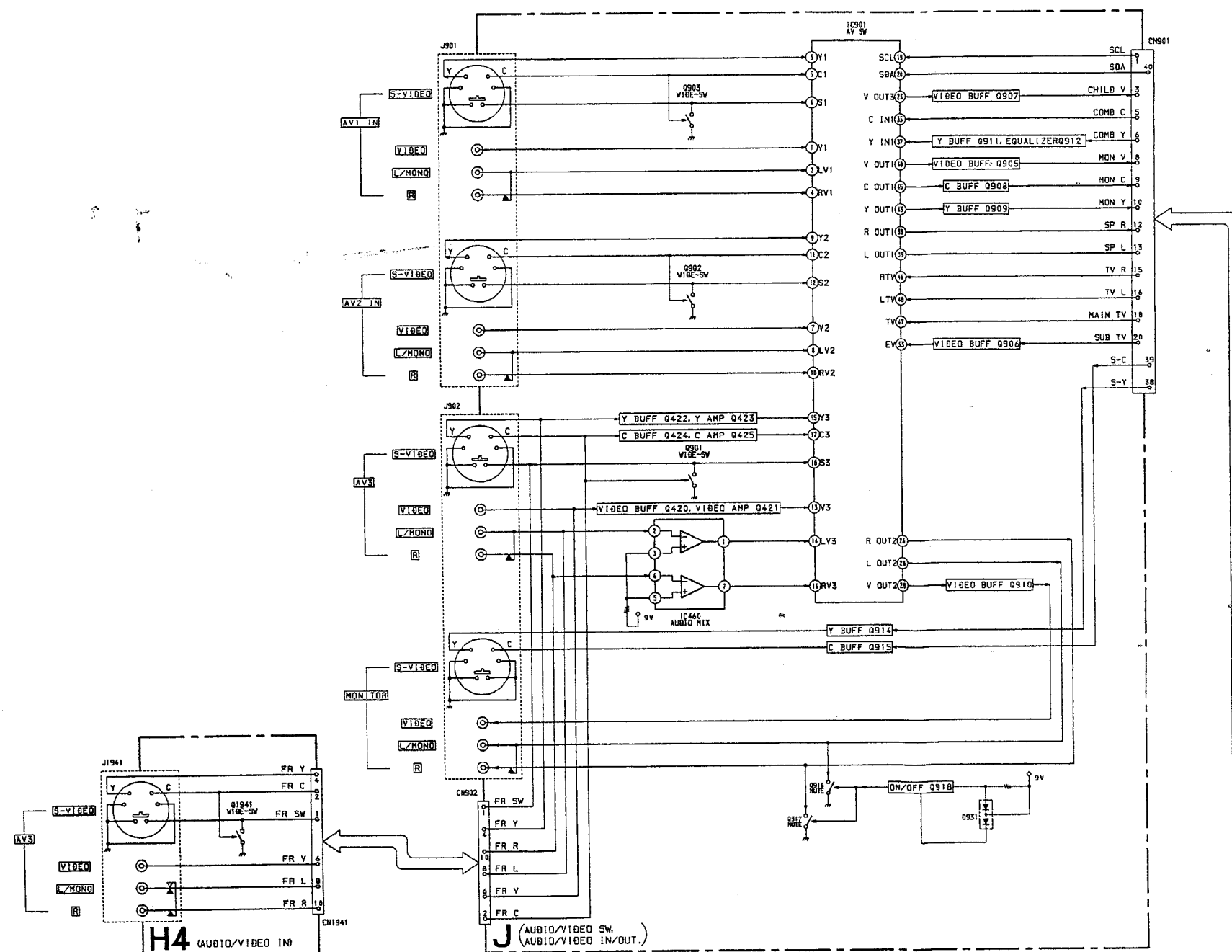


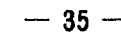
SECTION 5 DIAGRAMS

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

5-1. BLOCK DIAGRAM (1)





KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

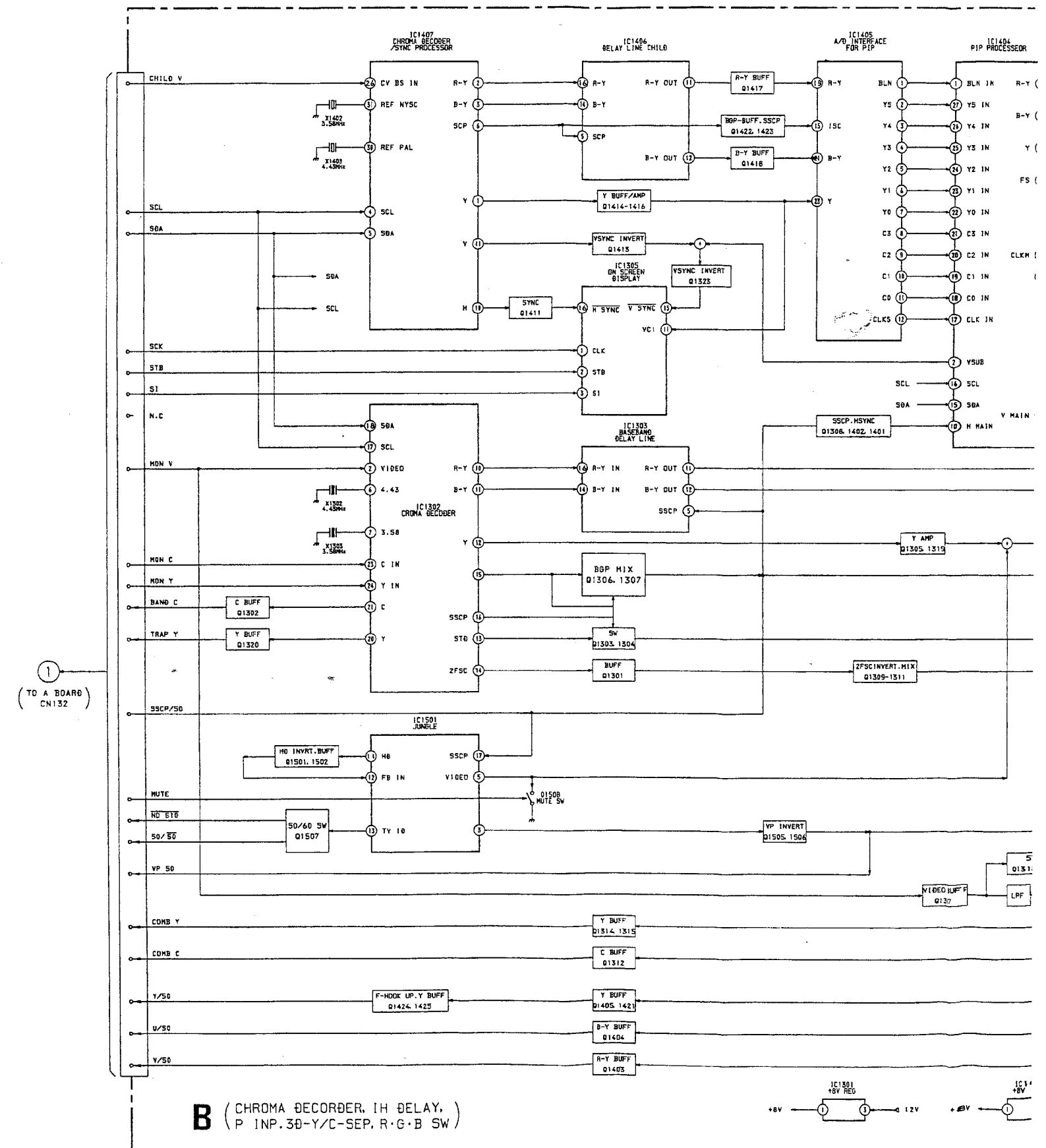
[illegible]

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

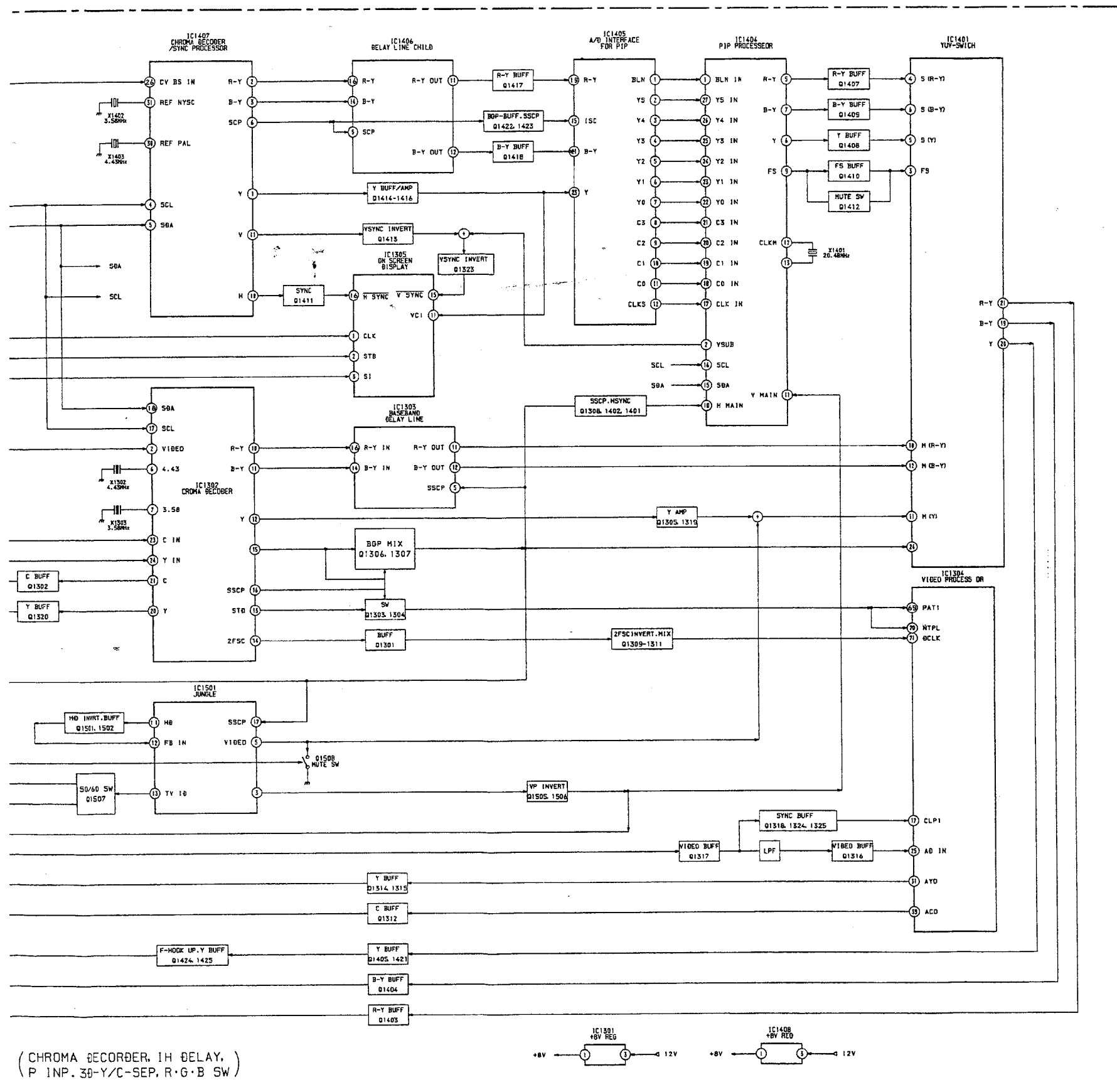
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

BLOCK DIAGRAM (2)



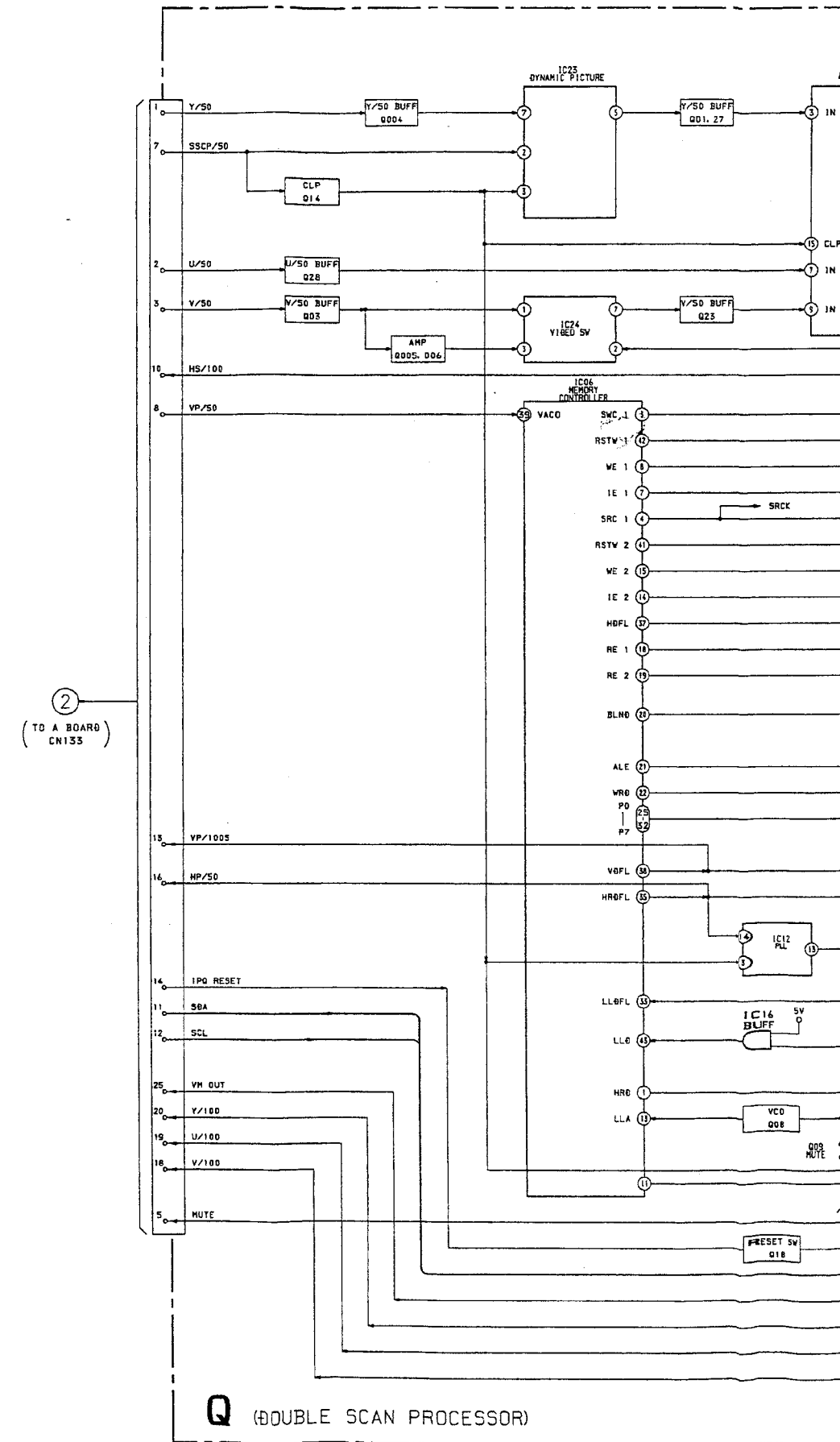
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850



BLOCK DIAGRAM (3)

KV-W28MH11/W2
KV-W32MH11/W3

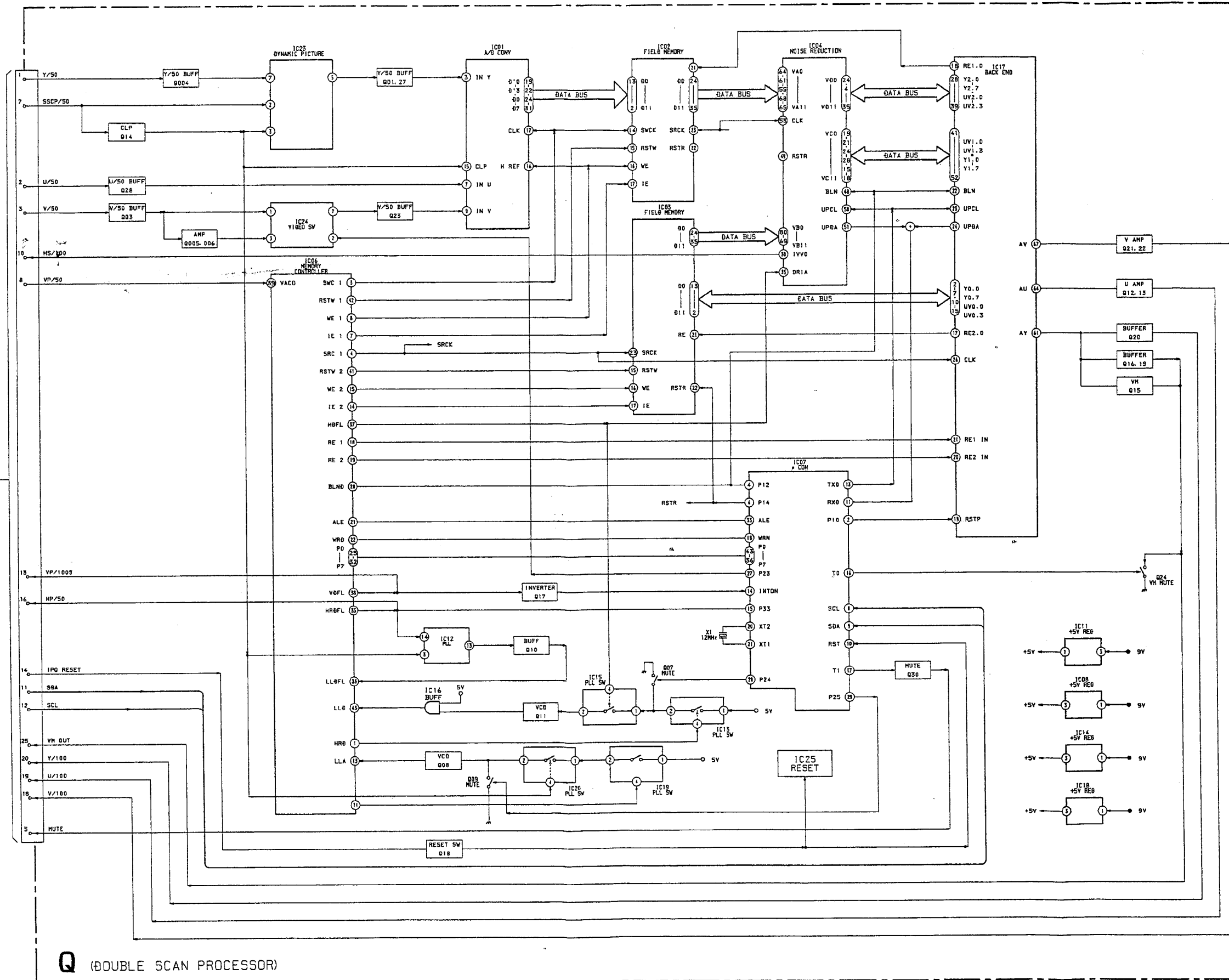


BLOCK DIAGRAM (3)

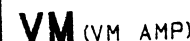
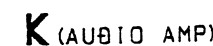
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

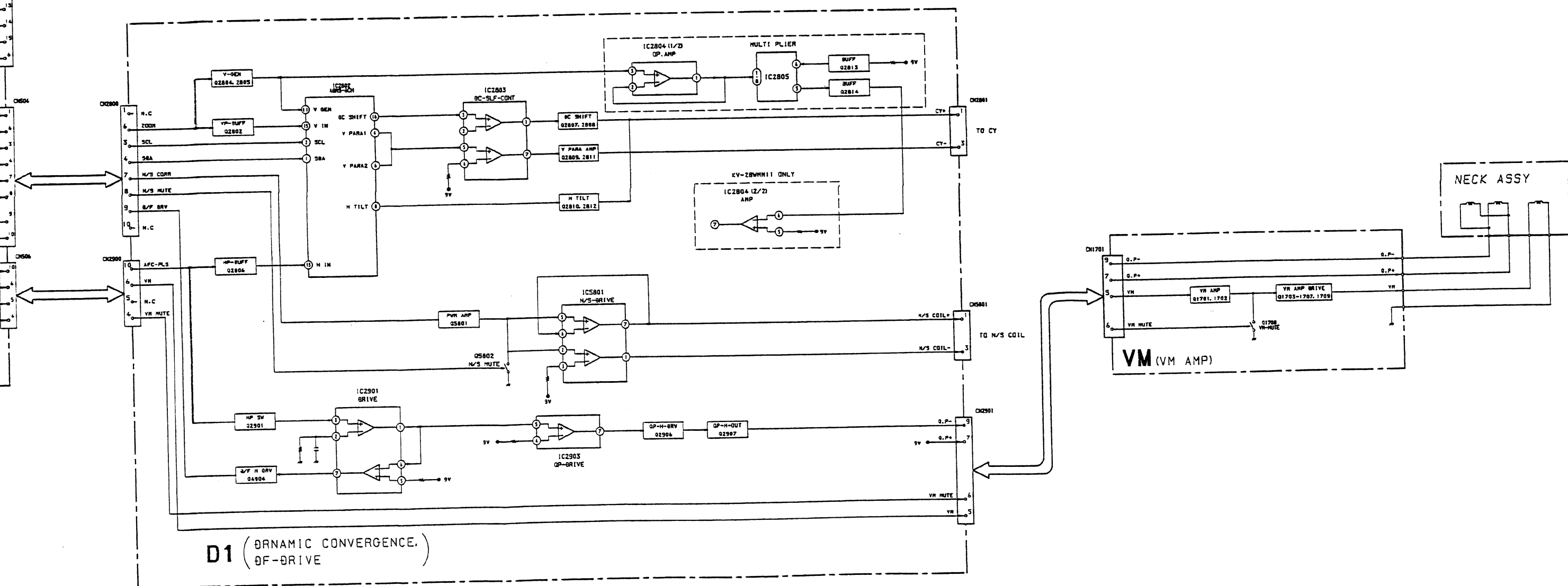
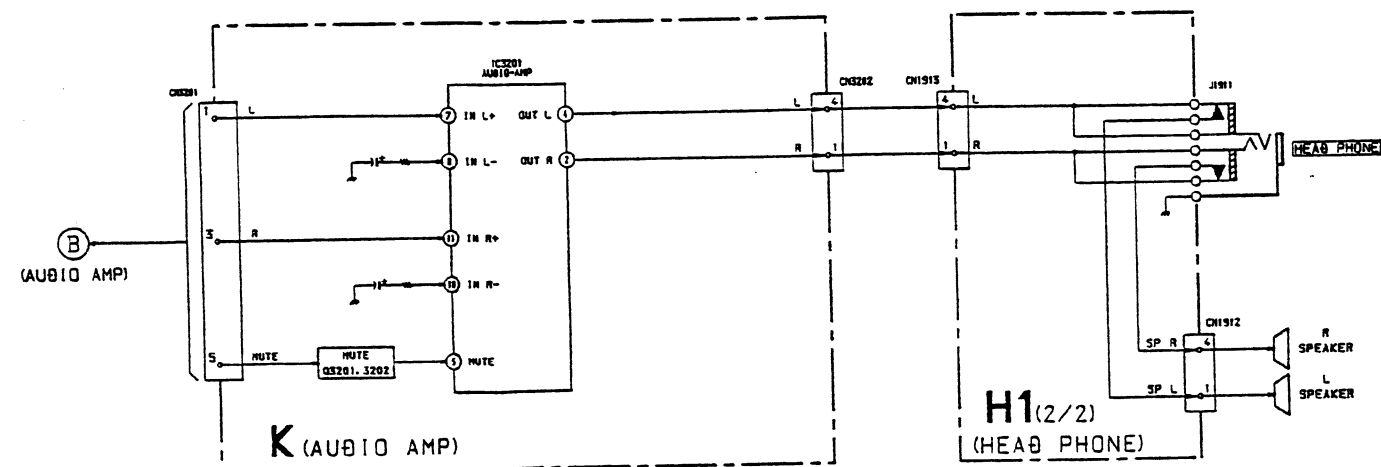
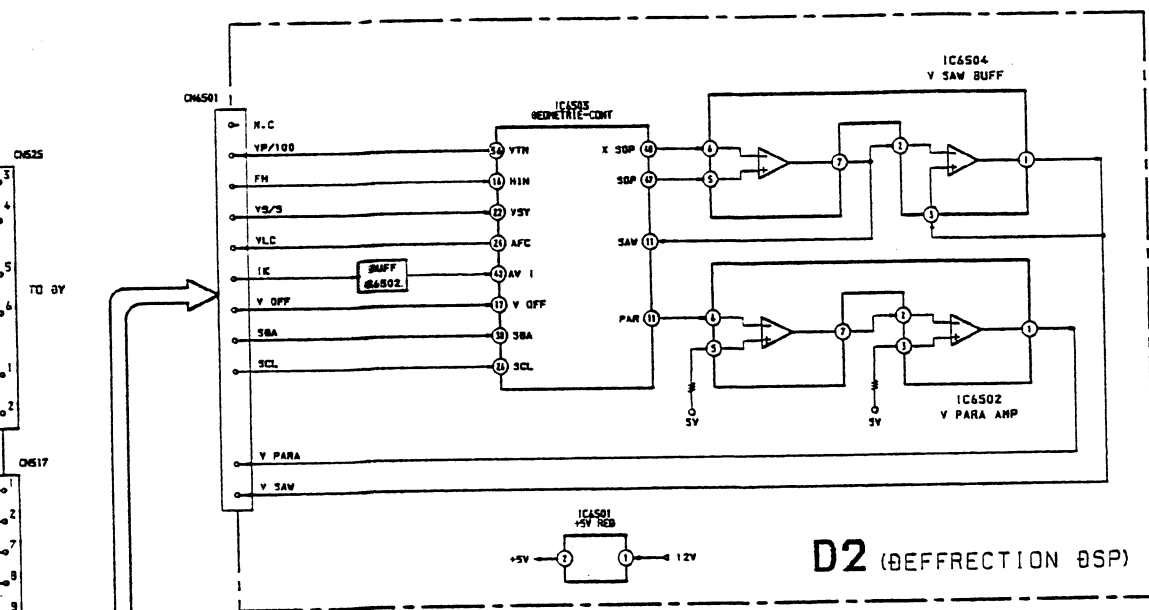
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

②
(TO A BOARD
CN155)

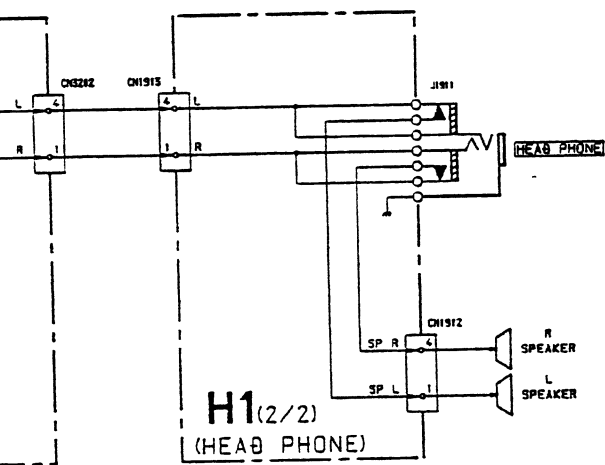
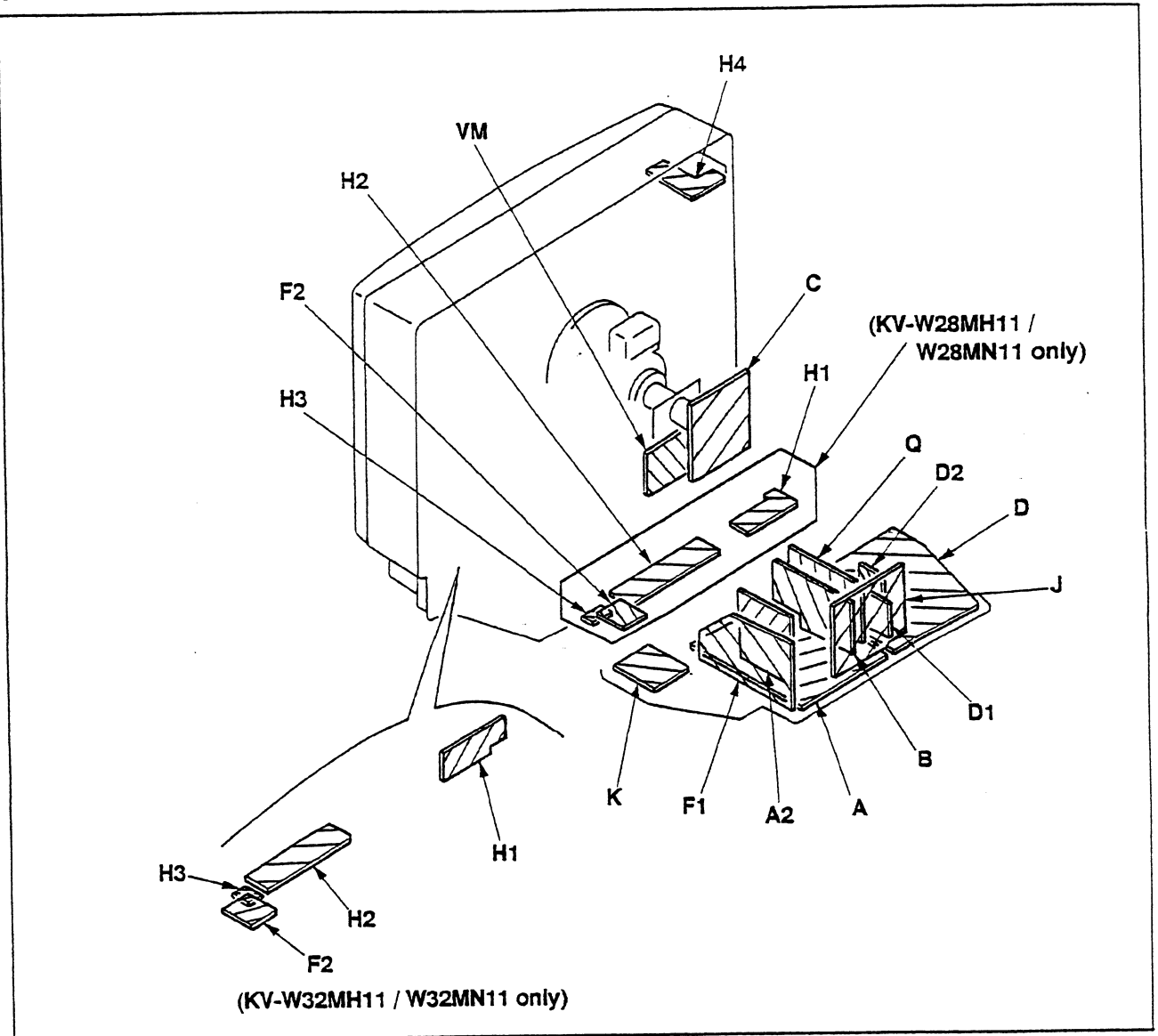


Q (DOUBLE SCAN PROCESSOR)





5-2. CIRCUIT BOARDS LOCATION



5-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50V or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.
 $\text{k}\Omega = 1000\Omega$. $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5mm
Rating electrical power: $\frac{1}{4}\text{W}$

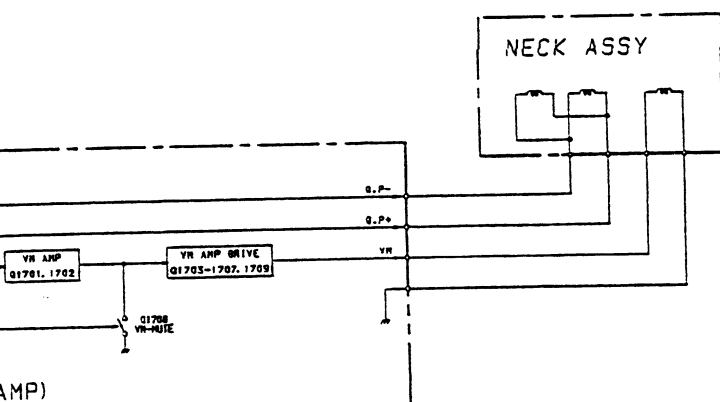
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$: earth-ground.
- : earth-chassis.

- Readings are taken with a color-bar signal input.
- Readings are taken with a $10\text{M}\Omega$ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- * : Measurement impossibility.
- : B + line.
- : B - line.
- (Actual measured value may be different).
- : signal path.(RF)
- Circled numbers are waveform references.
- No mark : with PAL color-bar signal received or common voltage.
- () : with SECAM color-bar signal received.
- { } : with NTSC 3.58 color-bar signal received.
- [] : with NTSC 4.43 color-bar signal received.

Reference information

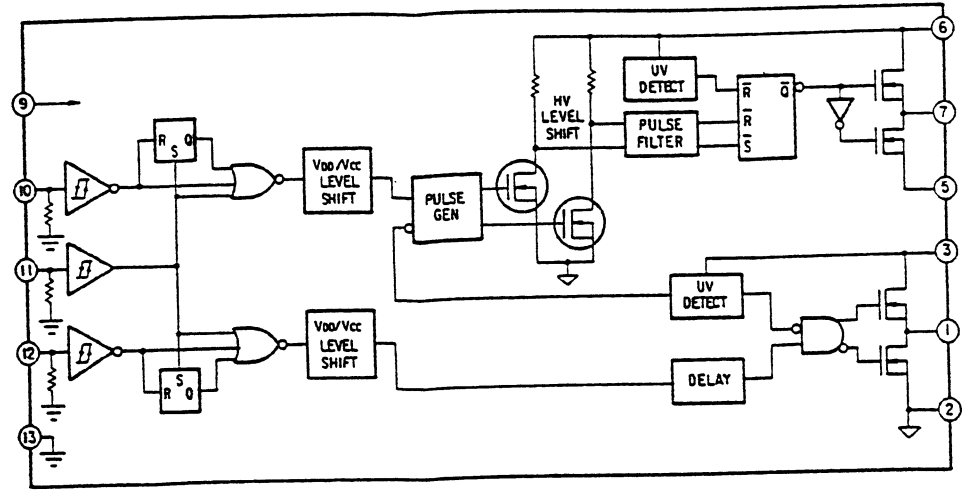
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

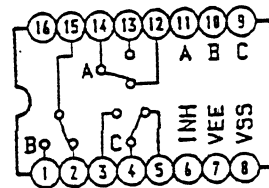


Schematic diagram

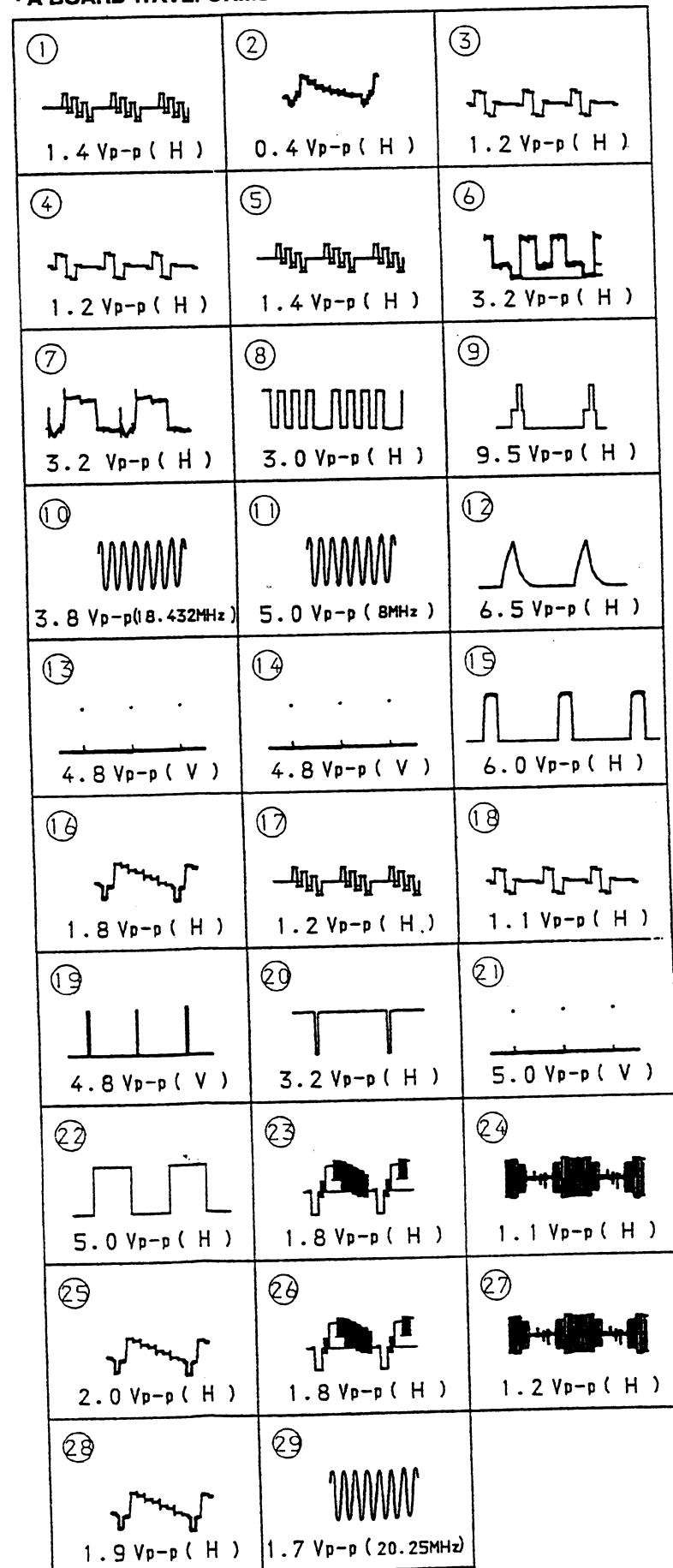
A BOARD IC602 IR2112

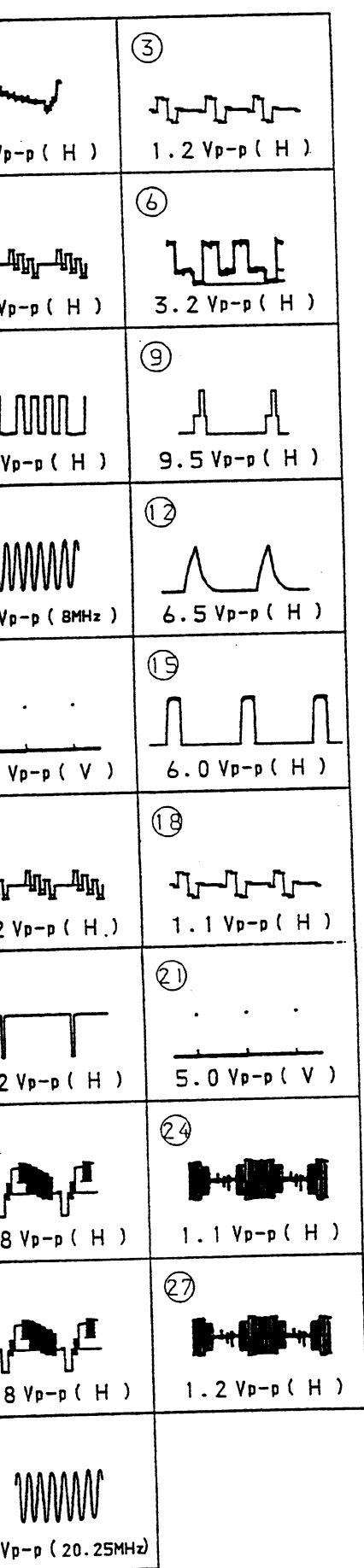


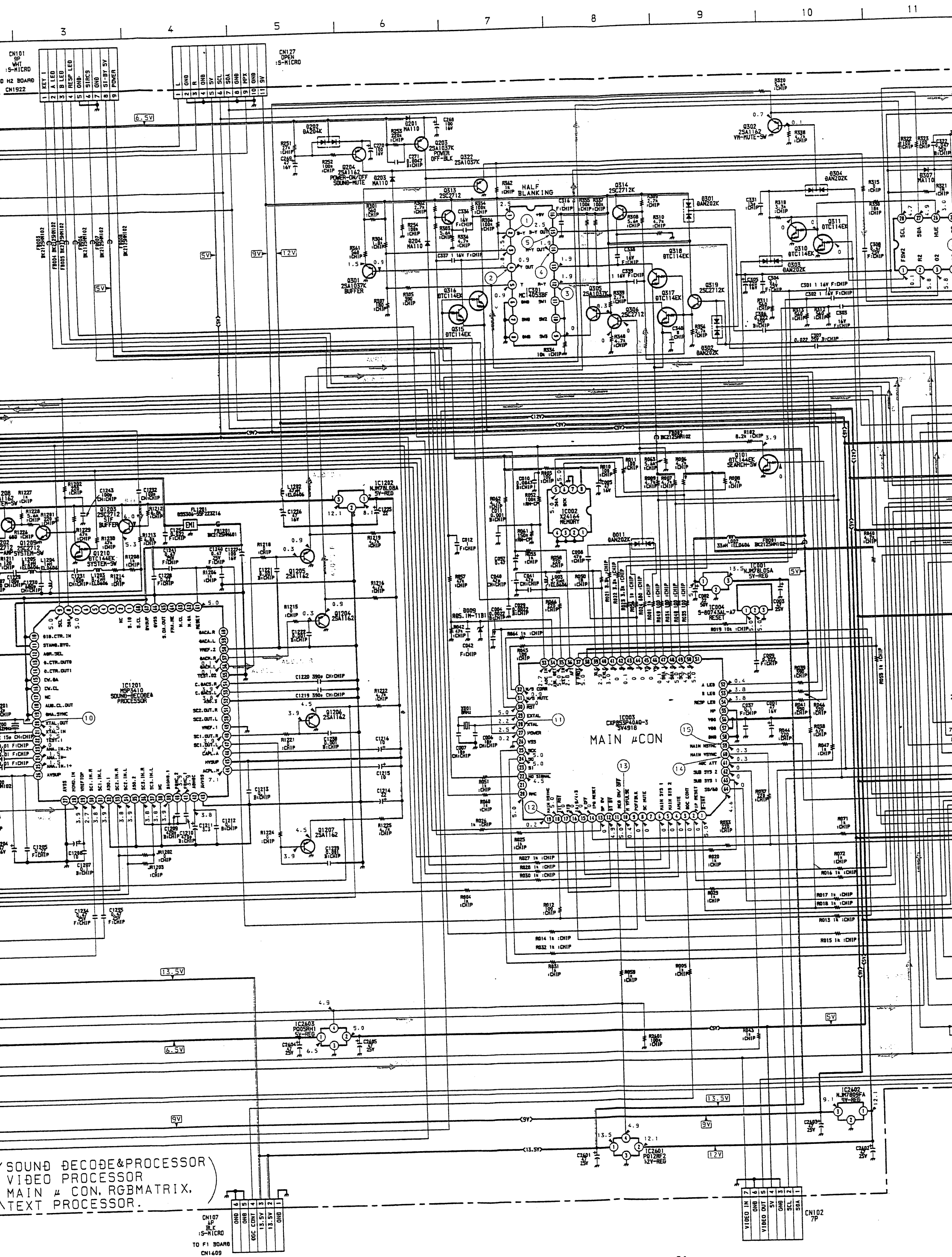
A BOARD IC301 MC14053BF

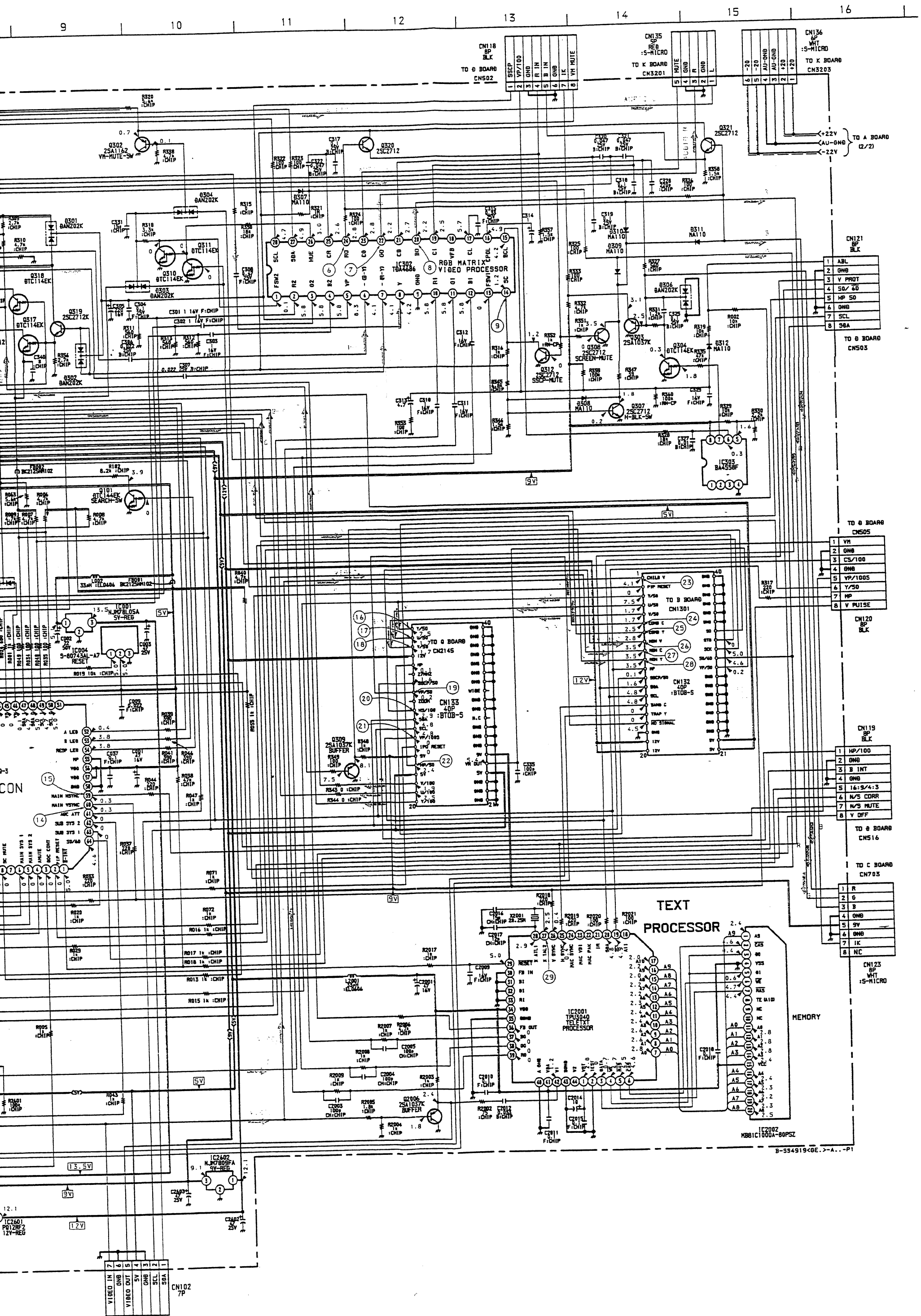


A BOARD WAVEFORMS



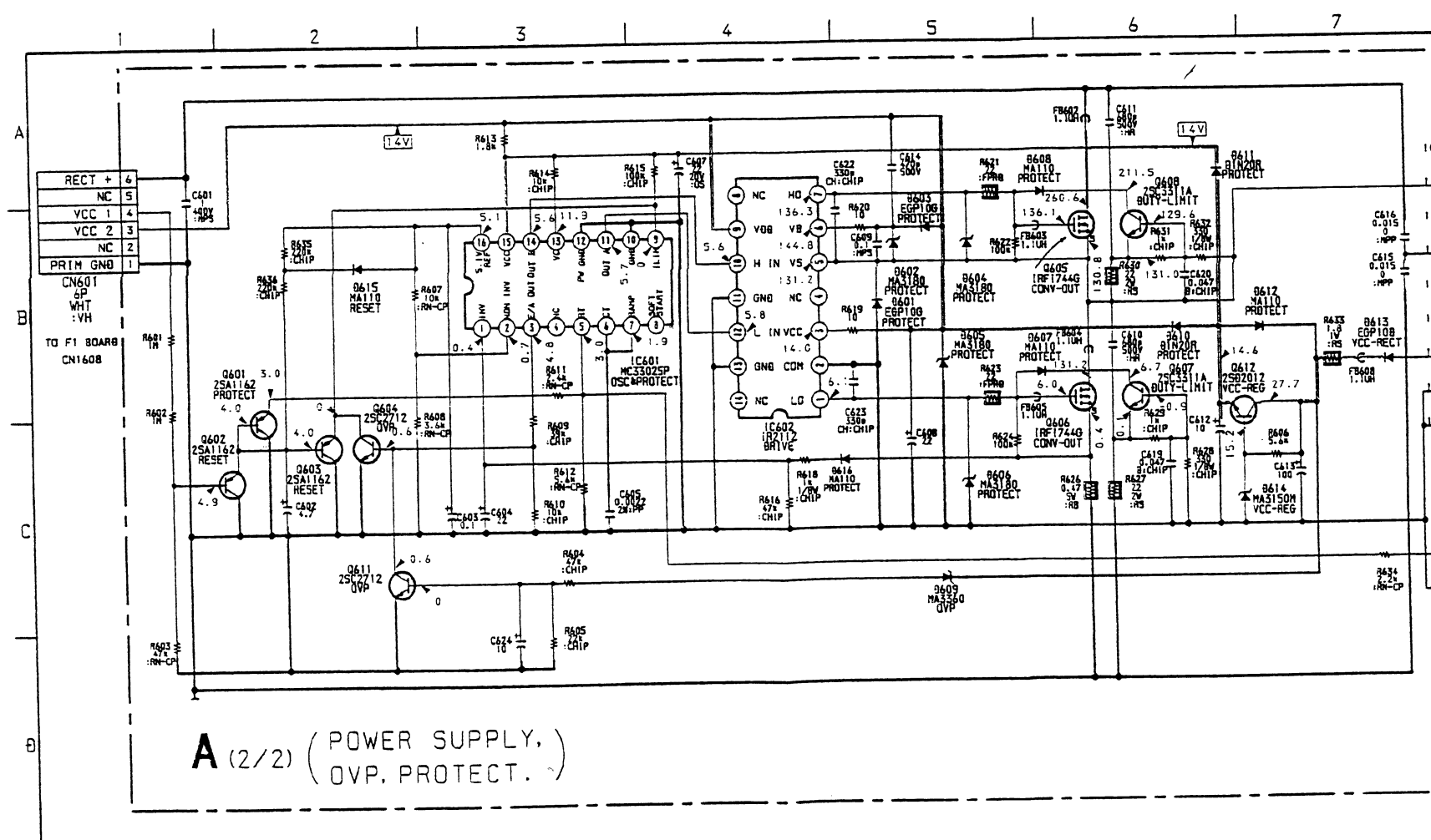
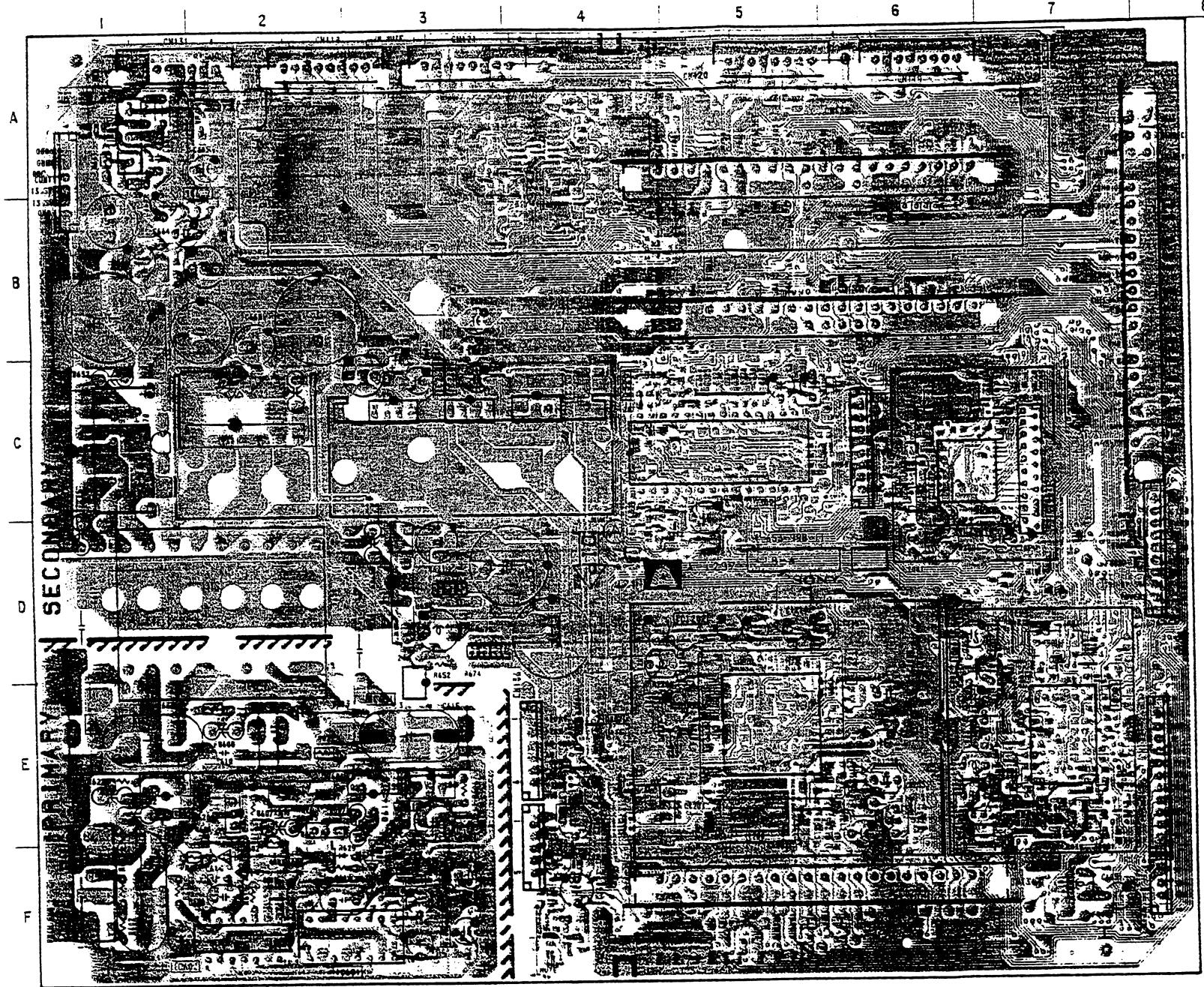






A SOUND DECODE & PROCESSOR,
VIDEO PROCESSOR, MAIN μ CON,
RGB MATRIX, TEXT PROCESSOR,
POWER SUPPLY, OVP

- A BOARD -



Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

A BOARD

IC

IC001	D-6,
	D-9
IC002	E-6
IC003	E-7
IC004	
IC301	A-12
IC302	C-5
IC303	C-11
IC601	F-2,
	F-14
IC602	F-2,
	F-14
IC650	A-1,
	A-15
IC651	E-3,
	E-13
IC652	B-2,
	B-14
IC1201	E-5
IC1202	D-5,
	D-11
IC2001	C-6
IC2002	C-7,
	C-9
IC2601	C-3,
	C-13
IC2602	C-4,
	C-12
IC2603	C-3,
	C-13

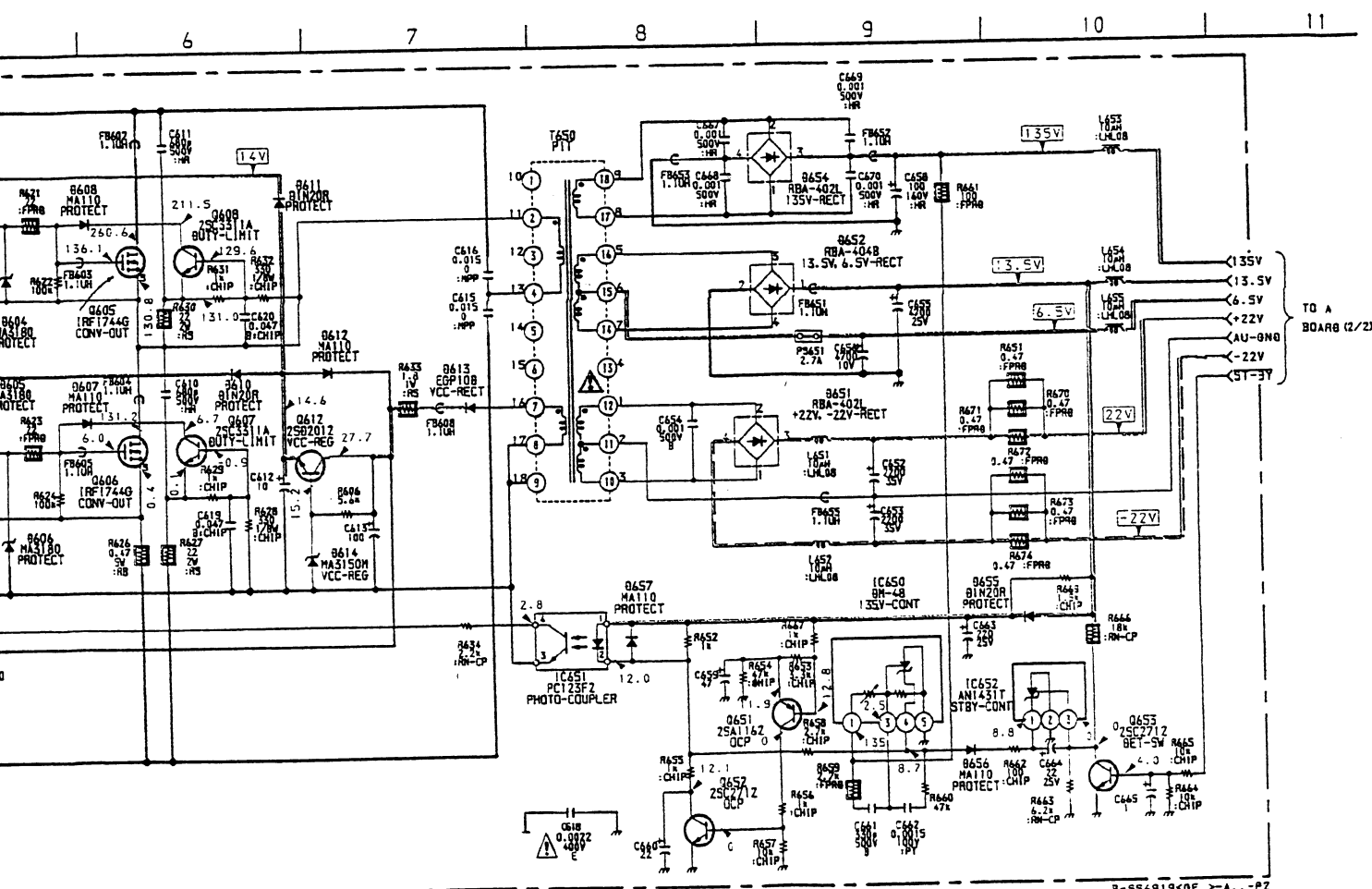
TRANSISTOR

Q101	E-9
Q203	F-12
Q204	F-12
Q301	A-13
Q302	C-11
Q303	C-10
Q304	C-11
Q305	A-12
Q306	A-12
Q307	E-4
Q308	E-4



NOTE:

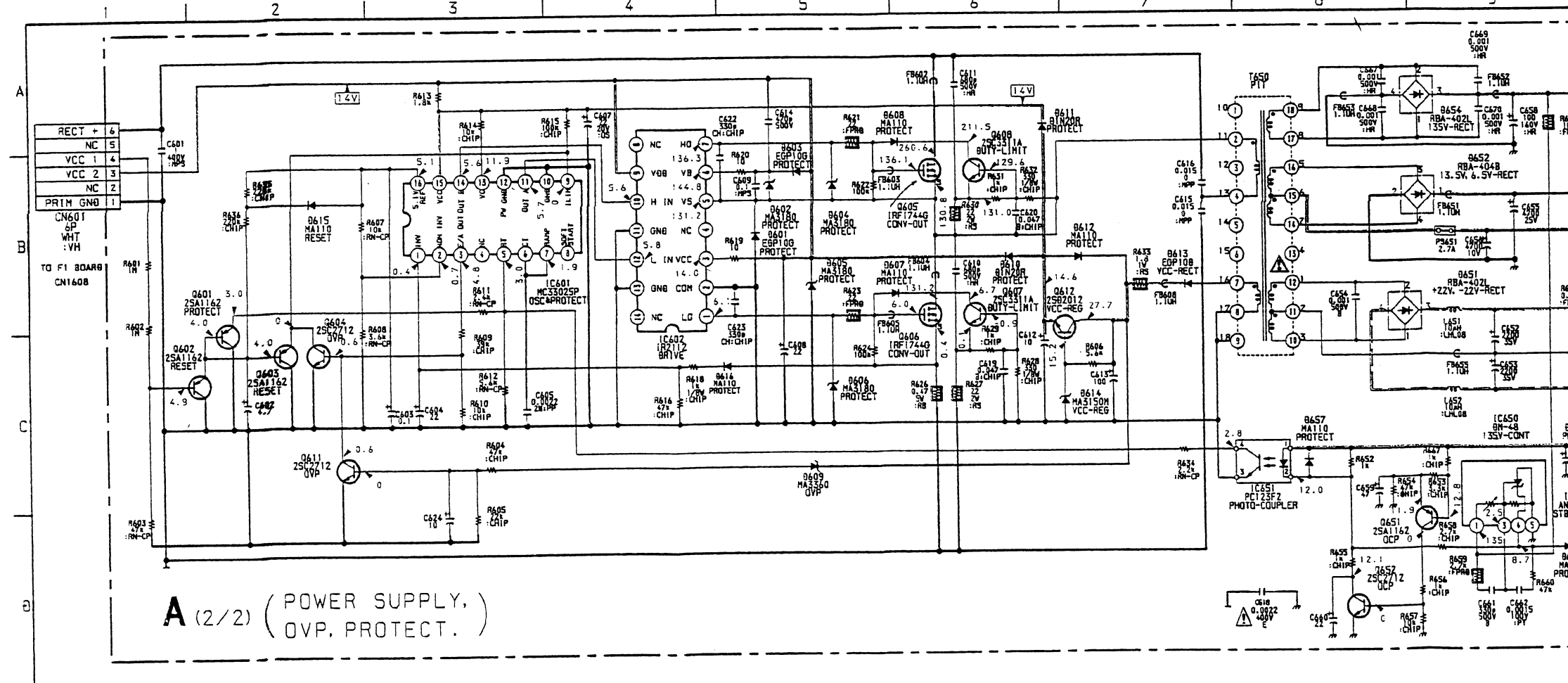
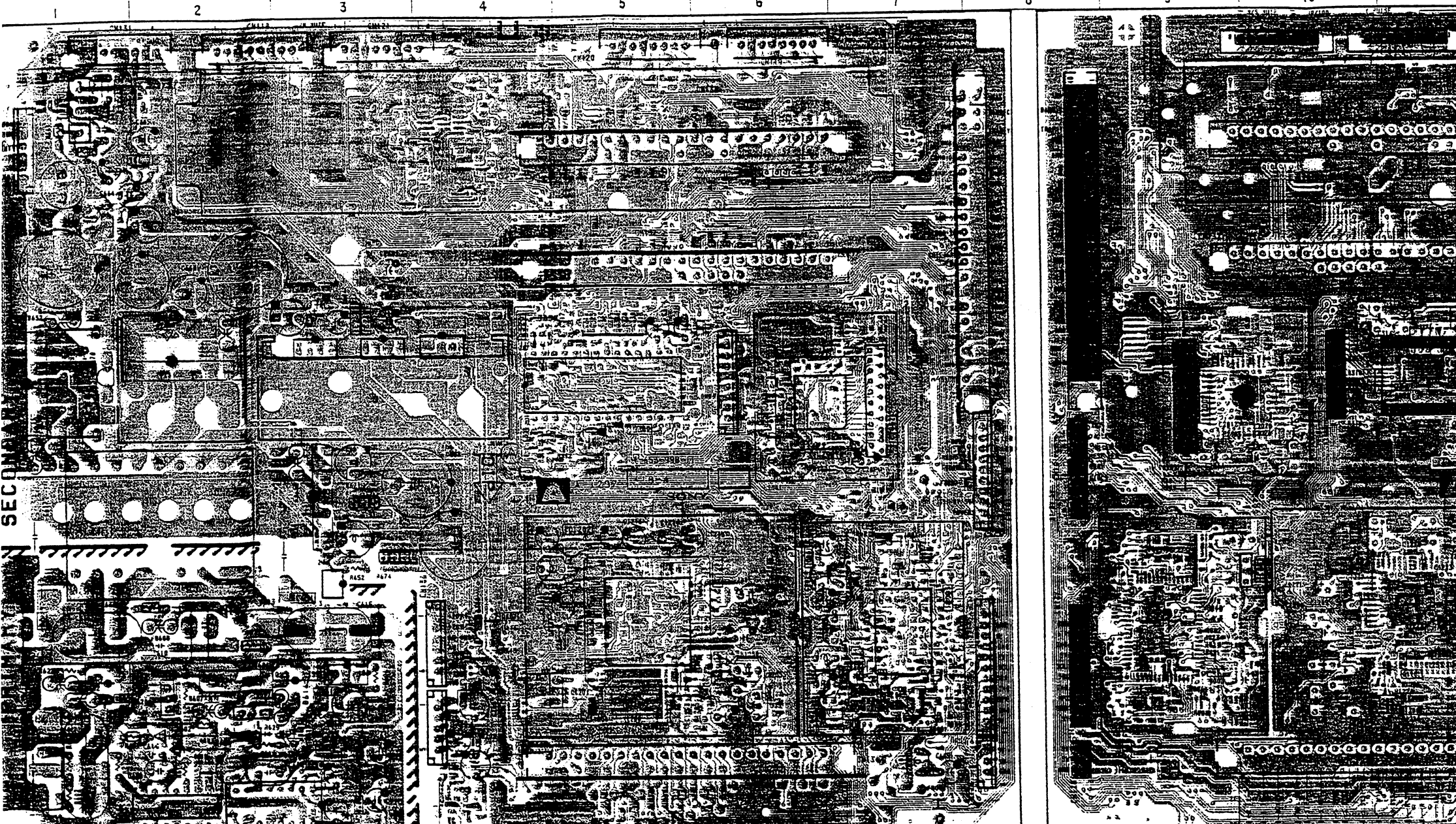
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



Schematic diagram

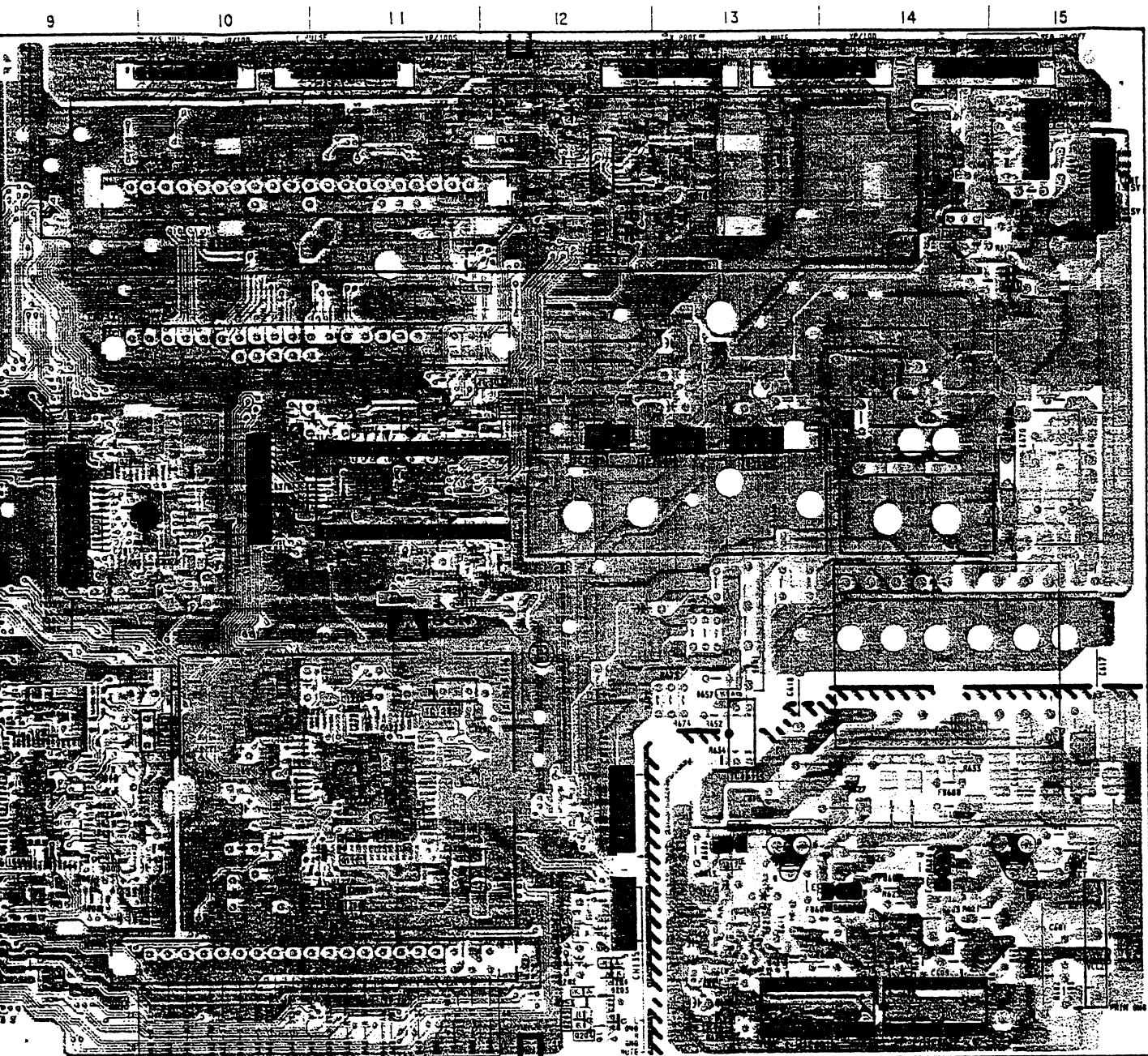
A

ECOMPARISON



Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

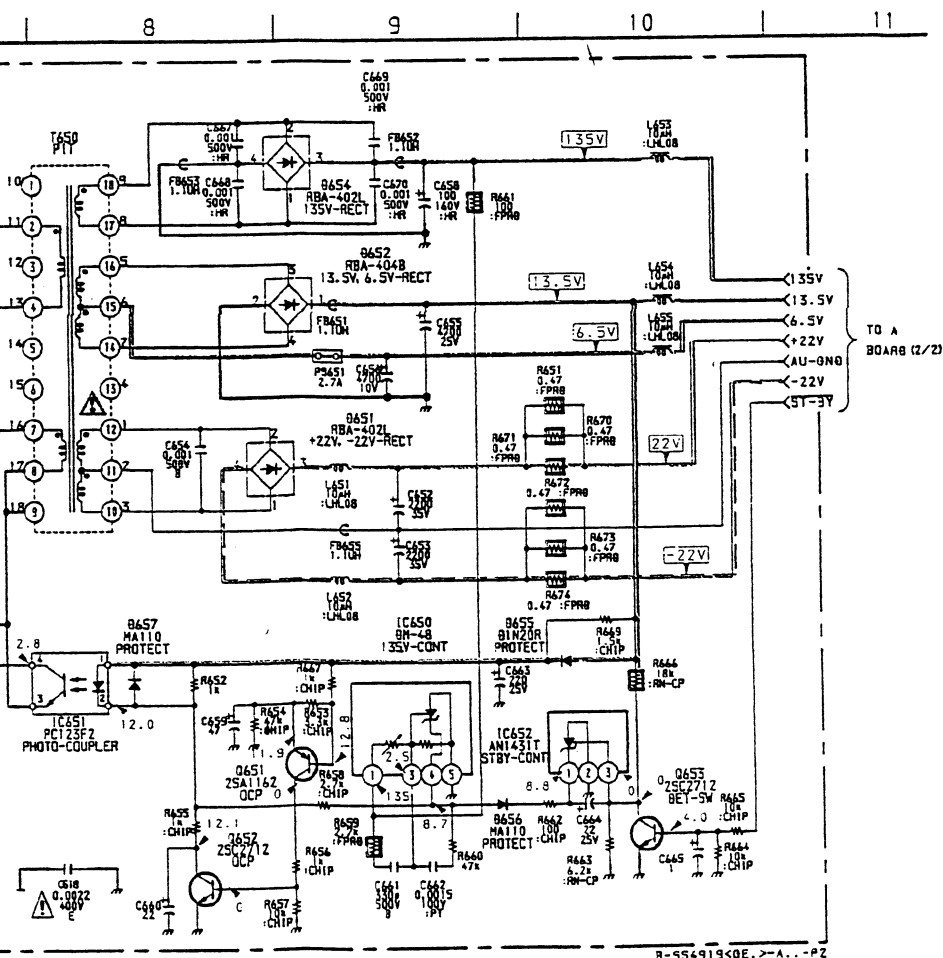


NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A BOARD

IC		TRANSISTOR		DIODE	
IC001	D-6, D-9	Q101	E-9	D009	E-9
IC002	E-6	Q203	F-12	D010	E-9
IC003	E-7	Q204	F-12	D011	E-7
IC004		Q301	A-13	D012	E-9
IC301	A-12	Q302	C-11	D201	F-12
IC302	C-5	Q303	C-10	D202	F-4
IC303	C-11	Q304	C-11	D203	F-12
IC601	F-2, F-14	Q305	A-12	D204	F-12
IC602	F-2, F-14	Q306	A-12	D301	C-12
IC650	A-1, A-15	Q307	E-4	D302	D-10
IC651	E-3, E-13	Q308	E-4		
IC652	B-2, B-14				
IC1201	E-5				
IC1202	D-5, D-11				
IC2001	C-6				
IC2002	C-7, C-9				
IC2601	C-3, C-13				
IC2602	C-4, C-12				
IC2603	C-3, C-13				
Q309	A-11				
Q310	D-11				
Q311	D-11				
Q312	C-11				
Q601	F-3				
Q602	F-3				
Q603	F-3				
Q604	F-3				
Q605	E-1, E-15				
Q606	E-3, E-13				
Q607	E-2, E-14				
Q608	E-2, E-14				
Q611	F-3				
Q612	E-3, E-13				
Q651	B-15				
Q652	B-15				
Q653	A-14				
Q1201	E-10				
Q1202	E-10				
Q1203	E-10				
Q1204	E-11				
Q1205	E-11				
Q1206	E-11				
Q1207	D-10				
Q1208	E-11				
Q1209	E-10				
Q1210	F-10				
Q2006	C-9				
D303	D-9				
D304	D-12				
D305					
D306	C-11				
D307	C-11				
D308	E-4				
D309	C-10				
D310	C-10				
D311	C-10				
D601	F-2, F-14				
D602	E-2				
D603	F-2, F-14				
D604	E-2				
D605	F-14				
D606	F-2				
D607	E-2				
D608	E-1				
D609	F-3				
D610	F-2, F-13				
D611	F-3, F-13				
D612	E-13				
D613	E-2, E-14				
D614	E-3				
D615	F-13				
D651	D-13				
D652	C-2, C-14				
D654	C-1, C-15				
D655	C-2, C-14				
D656	A-15				
D657	D-13				

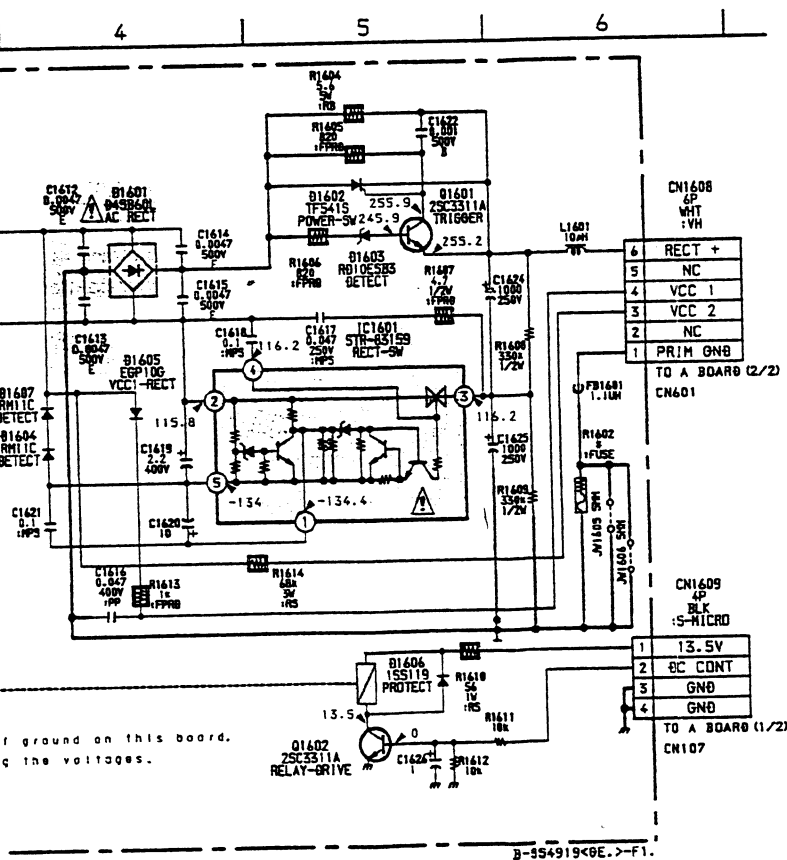


Schematic diagram

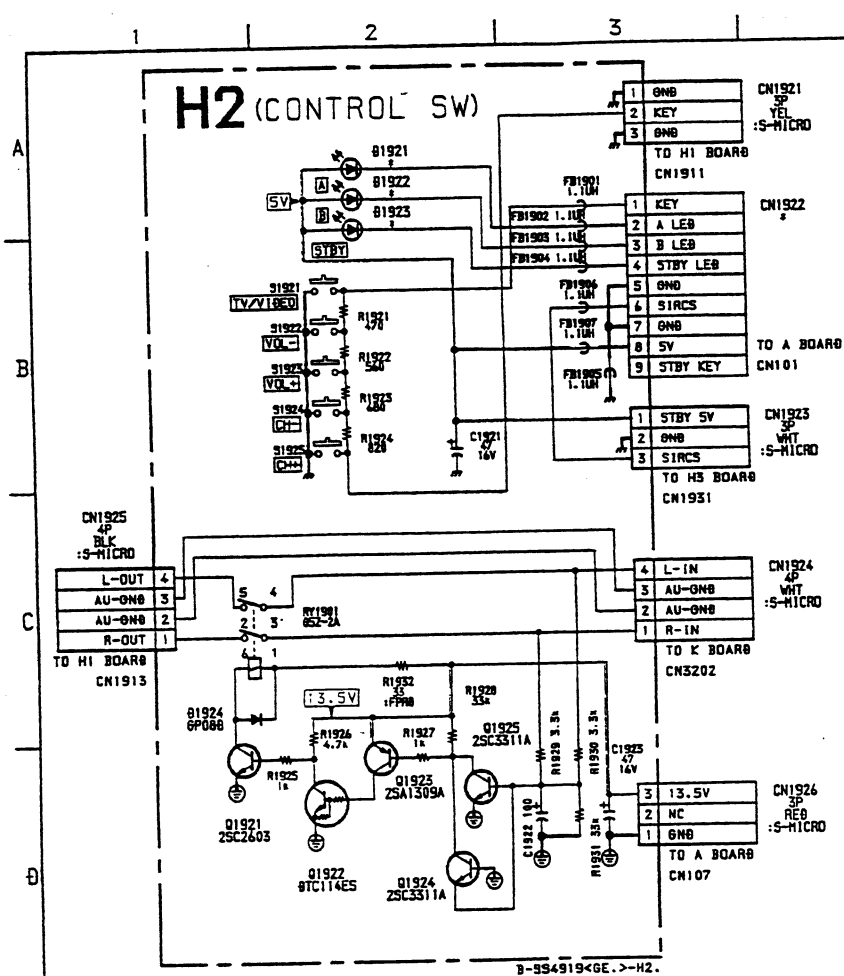
← **A (2/2)** board

Schematic diagrams

A2 **F1** **F2** **H1**
H2 **H3** **H4** **K** **VM** boards →



Ref. No.	Location	28 INCH	32 INCH
C107	B - 3	-	470p
C108	B - 3	-	22
C110	B - 4	-	47 16V
C111	B - 4	-	470p
C113	B - 4	-	47
C114	B - 4	-	470p
C116	B - 4	-	47 16V
C121	B - 5	-	47 16V
C122	B - 5	-	470p
IF102	A - 5	-	IFD380A
L103	B - 3	-	47 μ H
L104	B - 3	-	47 μ H
L105	B - 3	-	47 μ H
R109	B - 4	-	220
R110	B - 4	-	220
R111	B - 4	-	10k
R117	B - 4	-	22k
TP102	B - 3	-	○
TU102	A - 3	-	BTP-RG421

[illegible]

Ref. No.	Location	28 INCH	32 INCH
CN1922	B - 4	9P WHT	9P WHT-L
D1921	A - 2	SLR-54VC12	SEL1222R-C, D
D1922	A - 2	SLR-54VC12	SEL1222R-C, D
D1923	A - 2	SLR-54VC12	SEL1222R-C, D

1

2

A

B

IC1931
SBX1790
SIRCS RECEIVE

C1931
10V
16V

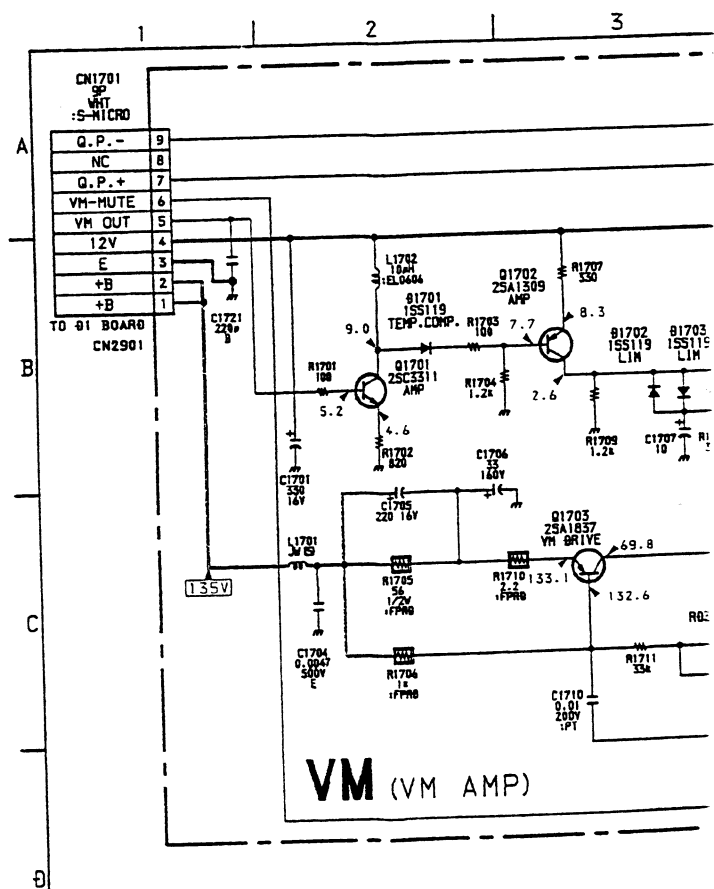
R1931
100

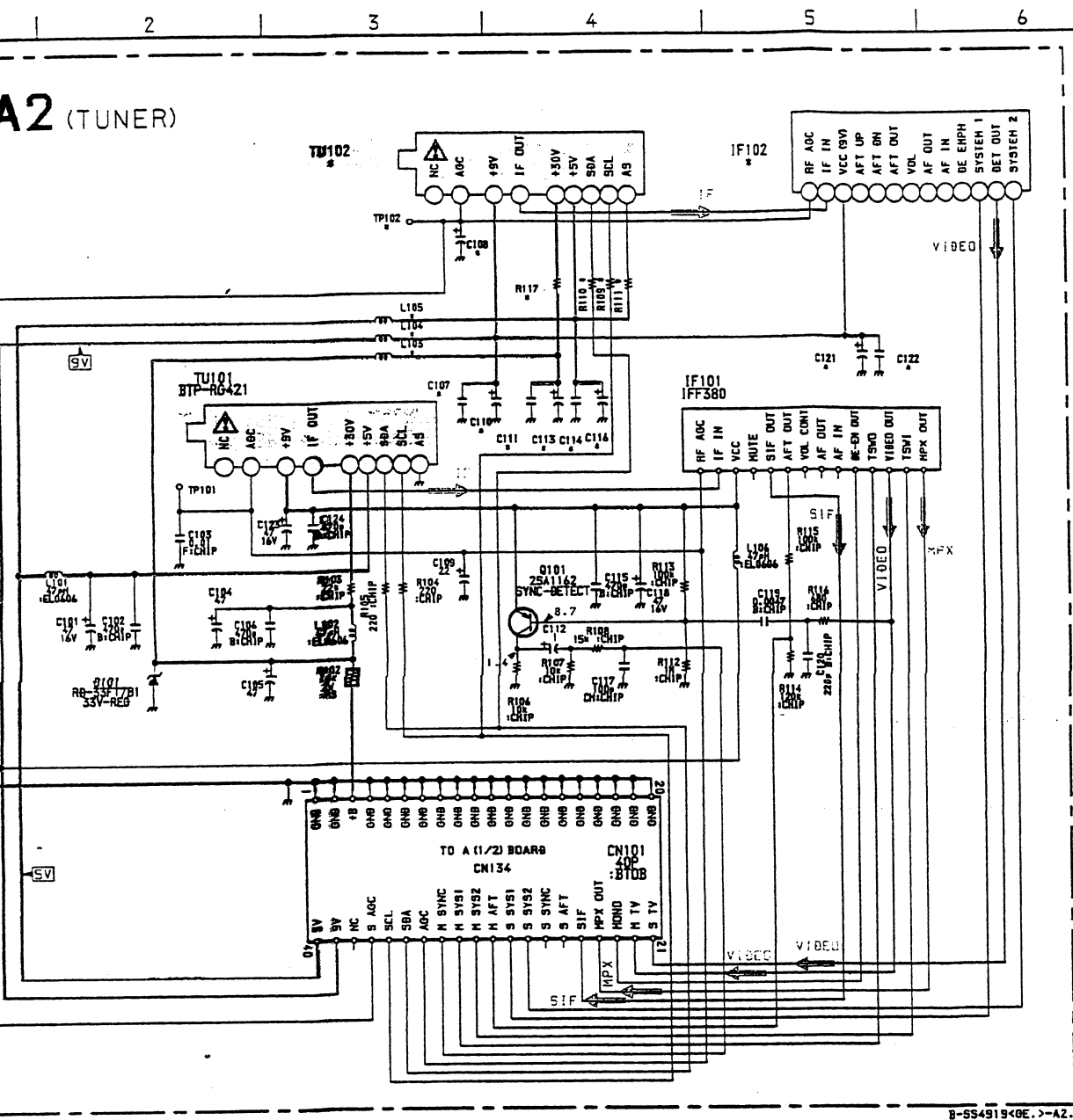
1	STBY 5V
2	GND
3	SIRCS

H3
(SIRCS RECEIVE)

CN1931
3P
WHT
5-MICRO
TO HZ BOARD
CN1923

R-554919<6E.>-H3.

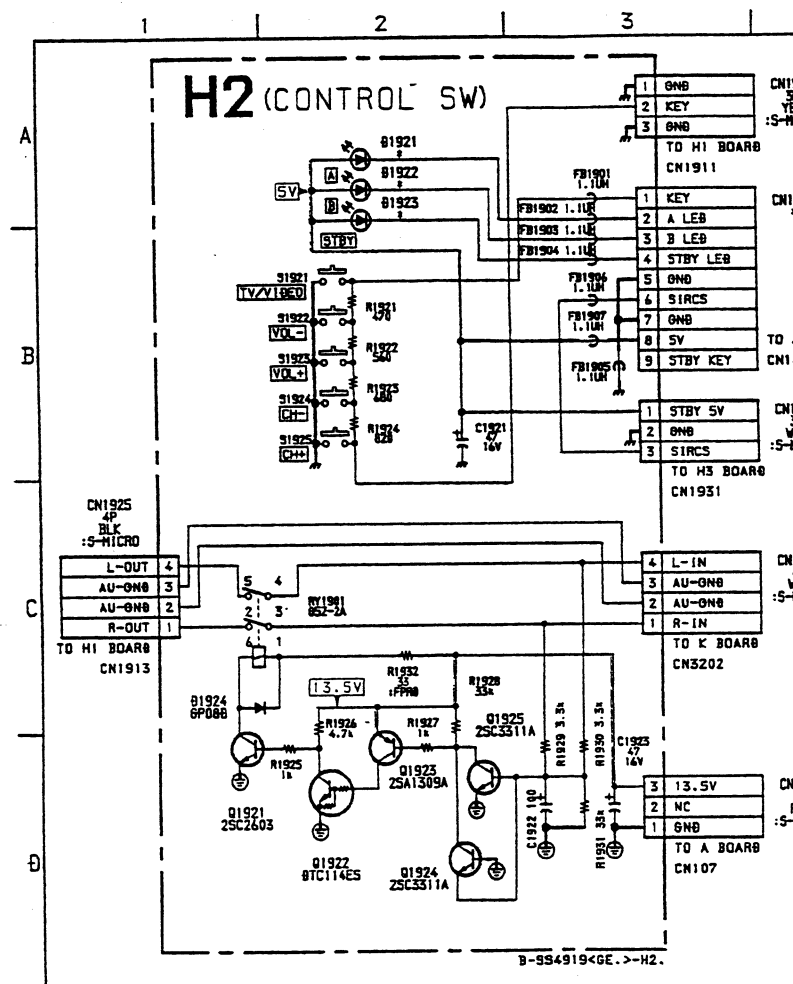
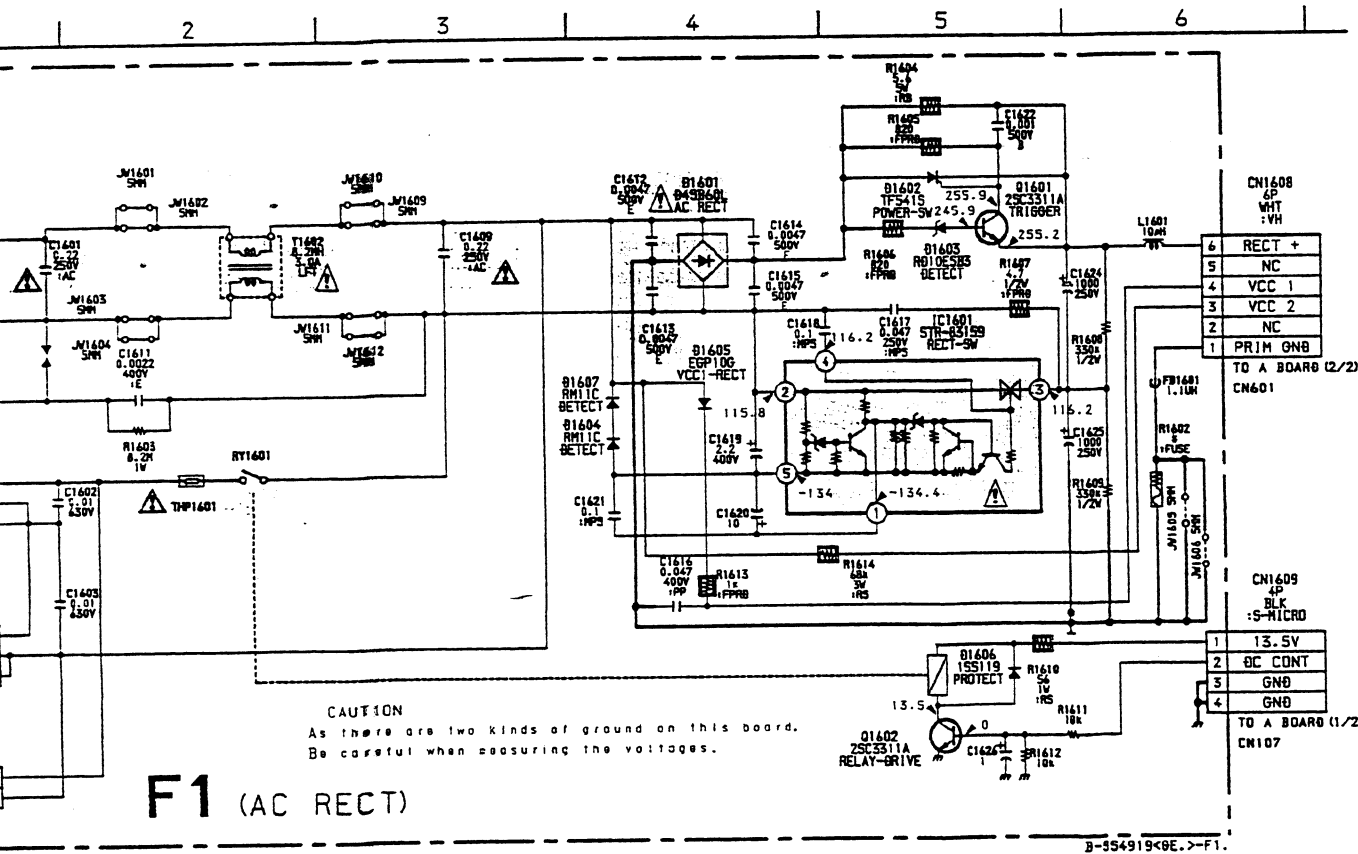




A2 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
C107	B-3	-	470p
C108	B-3	-	22
C110	B-4	-	47 16V
C111	B-4	-	470p
C113	B-4	-	47
C114	B-4	-	470p
C116	B-4	-	47 16V
C121	B-5	-	47 16V
C122	B-5	-	470p
IF102	A-5	-	IFD380A
L103	B-3	-	47 uH
L104	B-3	-	47 uH
L105	B-3	-	47 uH
R109	B-4	-	220
R110	B-4	-	220
R111	B-4	-	10k
R117	B-4	-	22k
TP102	B-3	-	O
TU102	A-3	-	BTP-RG421

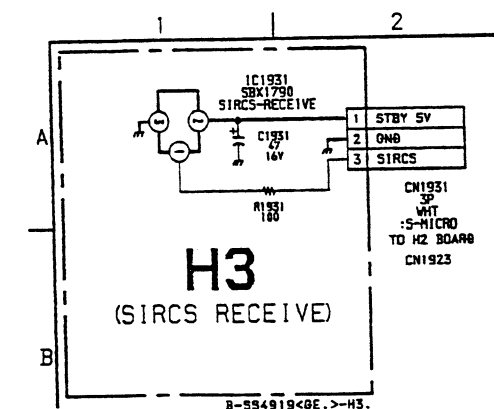
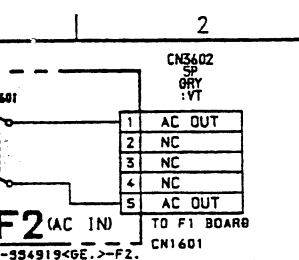
O: TO BE MOUNT
-: NOT MOUNT



H2 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
CN1922	B-4	9P WHT	9P WHT-L
D1921	A-2	SLR-54VC12	SEL1222R-C, D
D1922	A-2	SLR-54VC12	SEL1222R-C, D
D1923	A-2	SLR-54VC12	SEL1222R-C, D

O: TO BE MOUNT
-: NOT MOUNT



28 INCH	32 INCH
-	470p
-	22
-	47 16V
-	470p
-	47
-	470p
-	47 16V
-	47 16V
-	470p
-	IFD380A
-	47 μH
-	47 μH
-	47 μH
-	220
-	220
-	10k
-	22k
-	○
-	BTP-RG421

TO K BOARD
CN3202

4 A-OUT L (+)
3 A-OUT L (-)
2 A-OUT R (-)
1 A-OUT R (+)

CN1913
4P
YEL
:S-MICRO

4 SP R (+)
3 SP R (-)
2 SP L (-)
1 SP L (+)

CN1912
4P
YEL
:S-MICRO
TO SPEAKER

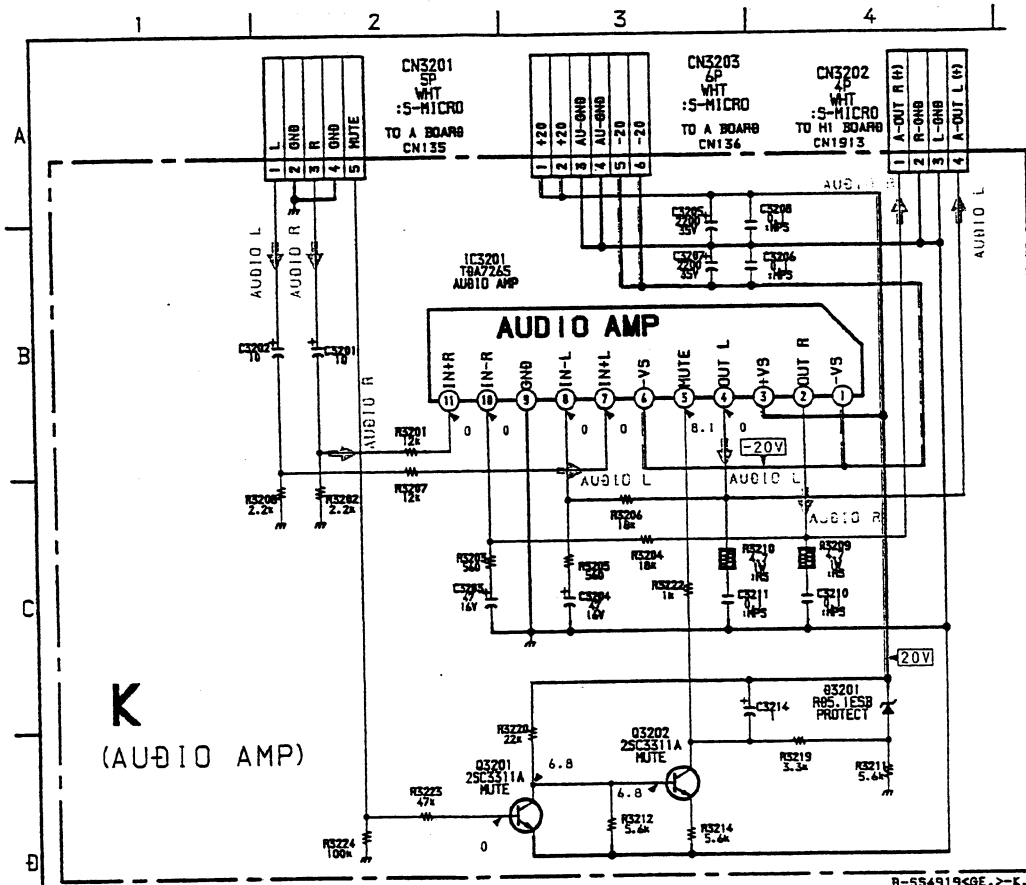
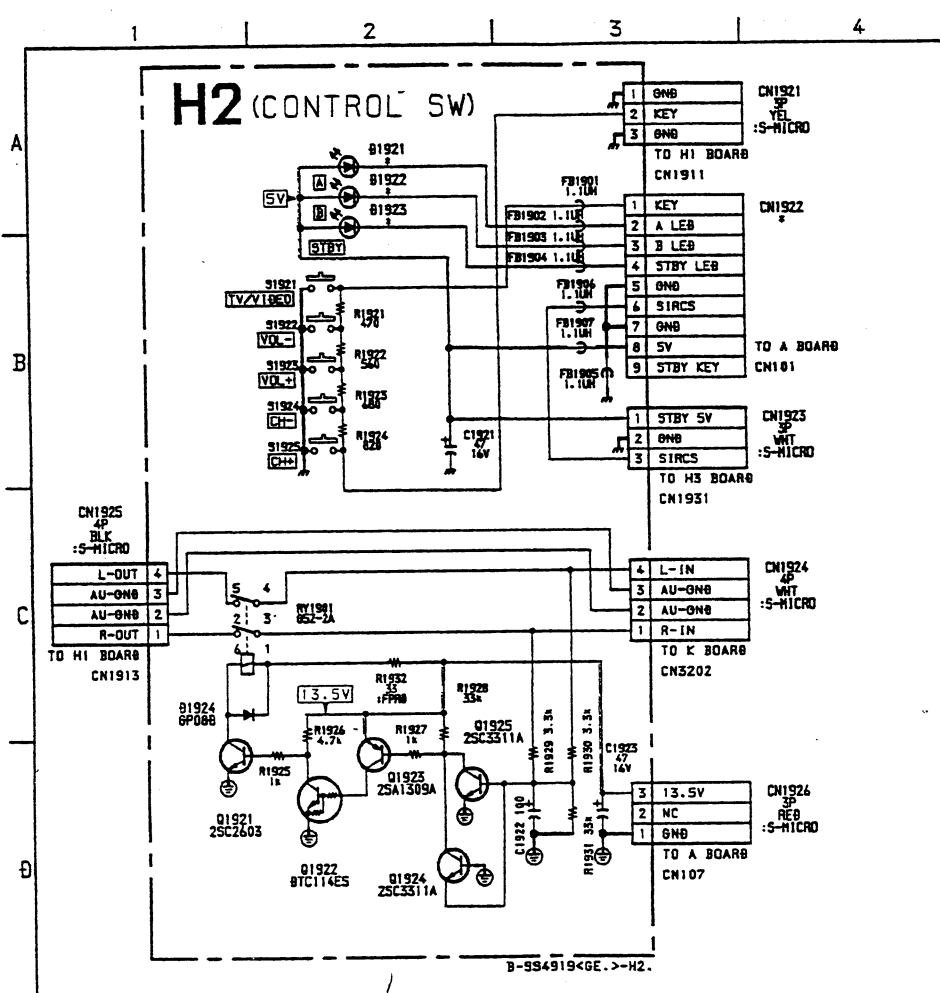
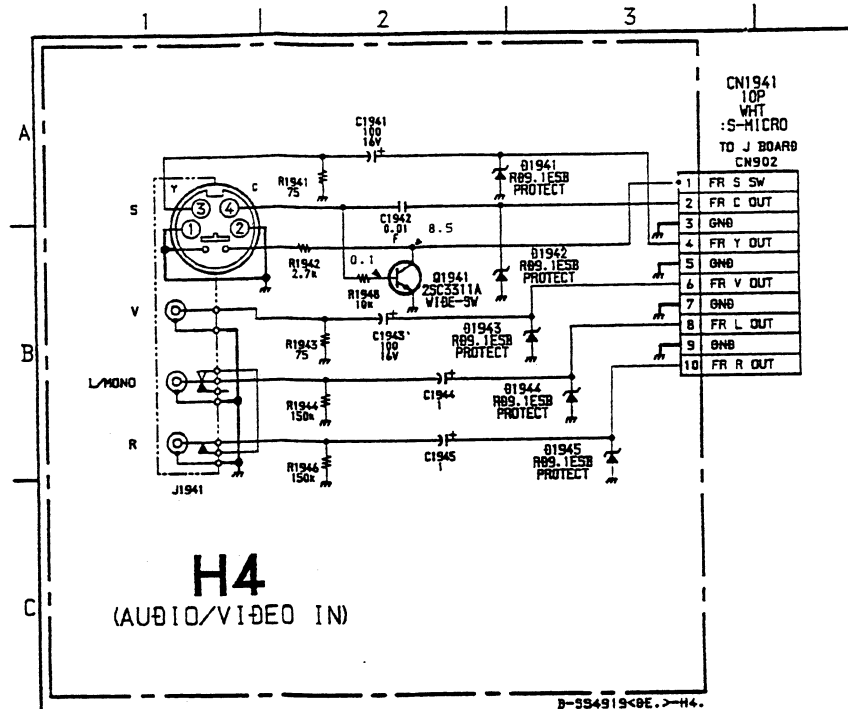
TO H2 BOARD

1 GND
2 KEY
3 GND

CN1911
3P
YEL
:S-MICRO
CN1921

H1
(AUDIO OUT. CONTROL SW.)

3-554919<BE.>-H1-



Ref. No.	Location	28 INCH	32 INCH
CN1922	B - 4	9P WHT	9P WHT-L
D1921	A - 2	SLR-54VC12	SEL1222R-C, D
D1922	A - 2	SLR-54VC12	SEL1222R-C, D
D1923	A - 2	SLR-54VC12	SEL1222R-C, D

1

2

A

B

IC1931
SBK1790
SIRCS-RECEIVE

5V

0.01M

10V

100

1 5V

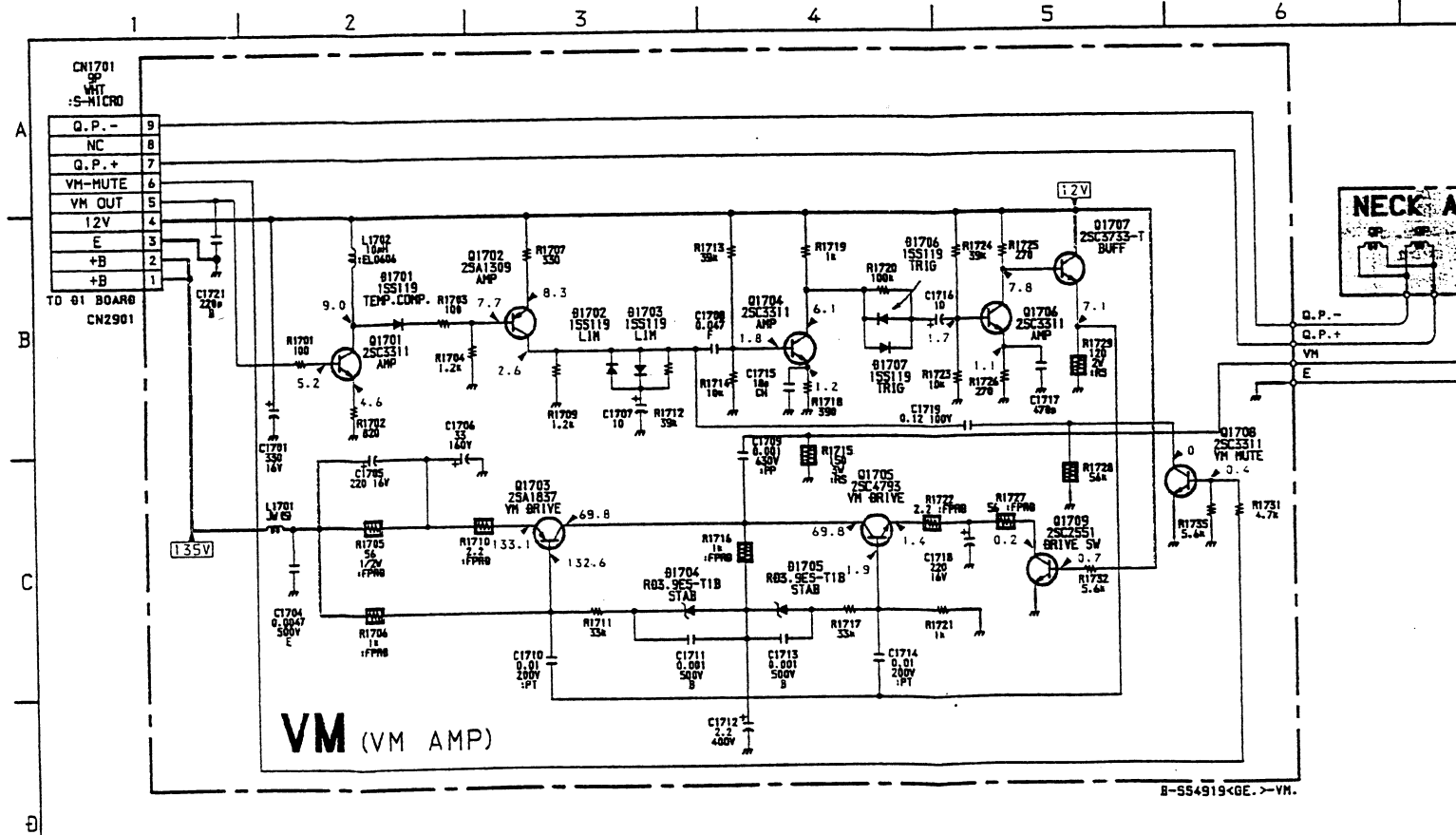
2 0.01M

3 SIRCS

IC1931
3P
SIRCS
TO H2 BOARD
CN1923

H3
(SIRCS RECEIVE)

8-884919C8E >H3

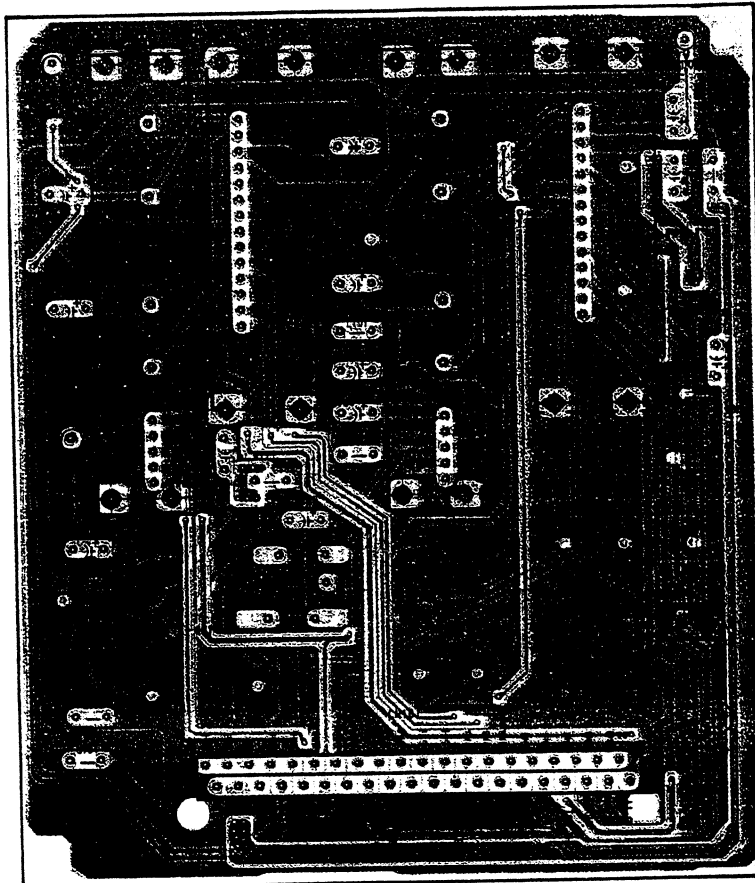


KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

A2 [TUNER] **F1** [AC RECT] **F2** [AC IN] **H1** [AUDIO OUT, CONTROL SW] **H2** [CONTROL SW] **H3** [SIRCS RECEIVE] **H4** [AUDIO/VIDEO IN] **K** [AUDIO AMP] **VM** [VM AMP]

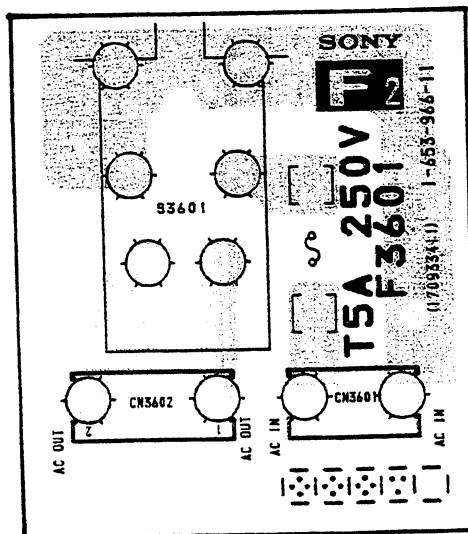
- A2 BOARD -



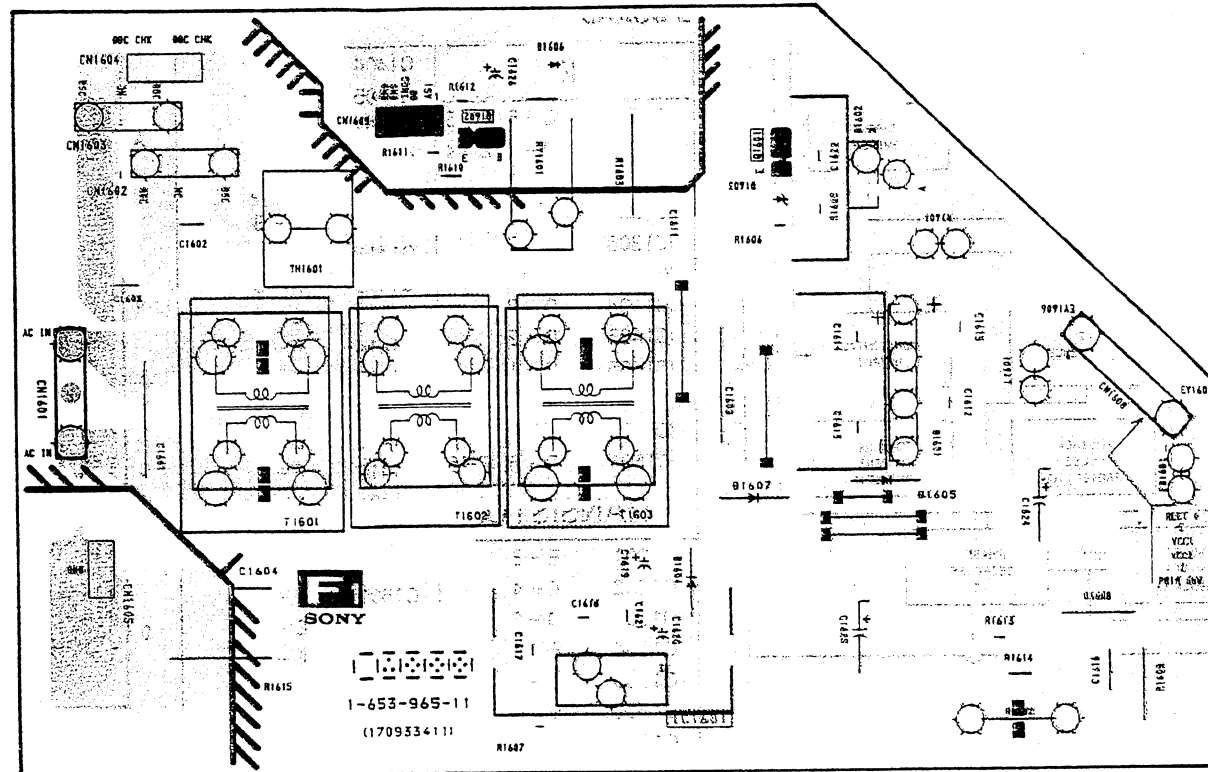
Note :

- Pattern from the side which enables seeing.
- Pattern of the rear side.

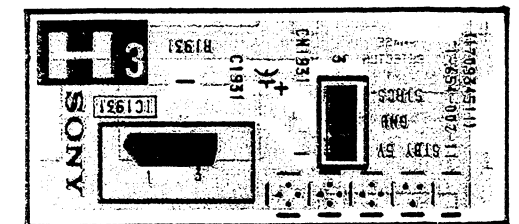
- F2 BOARD -



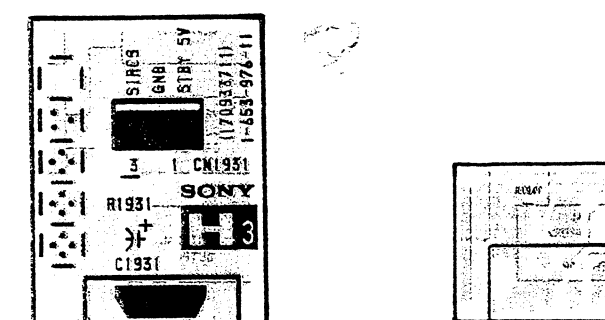
- F1 BOARD -



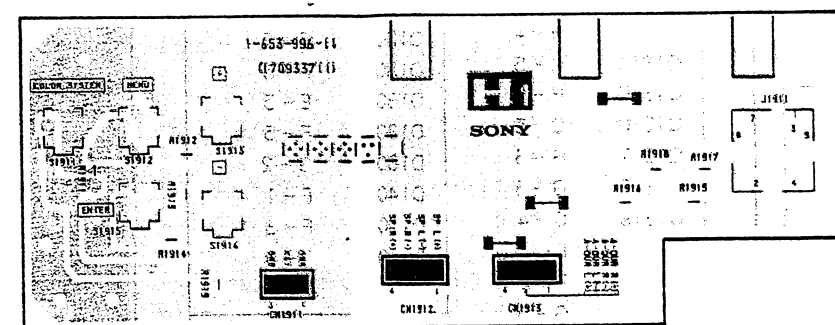
- H3 BOARD - (KV-W28MH11 / W28MN11)



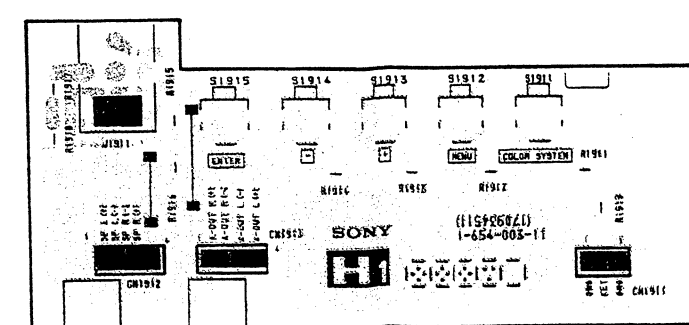
- H3 BOARD - (KV-W32MH11 / W32MN11)



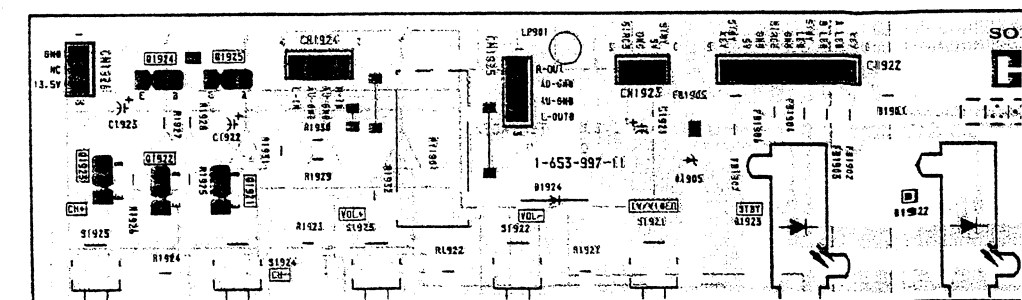
- H1 BOARD - (KV-W28MH11 / W28MN11)



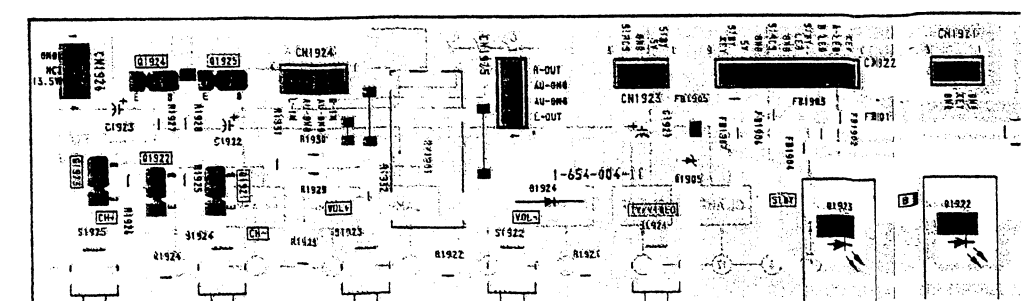
- H1 BOARD - (KV-W32MH11 / W32MN11)



- H2 BOARD - (KV-W28MH11 / W28MN11)

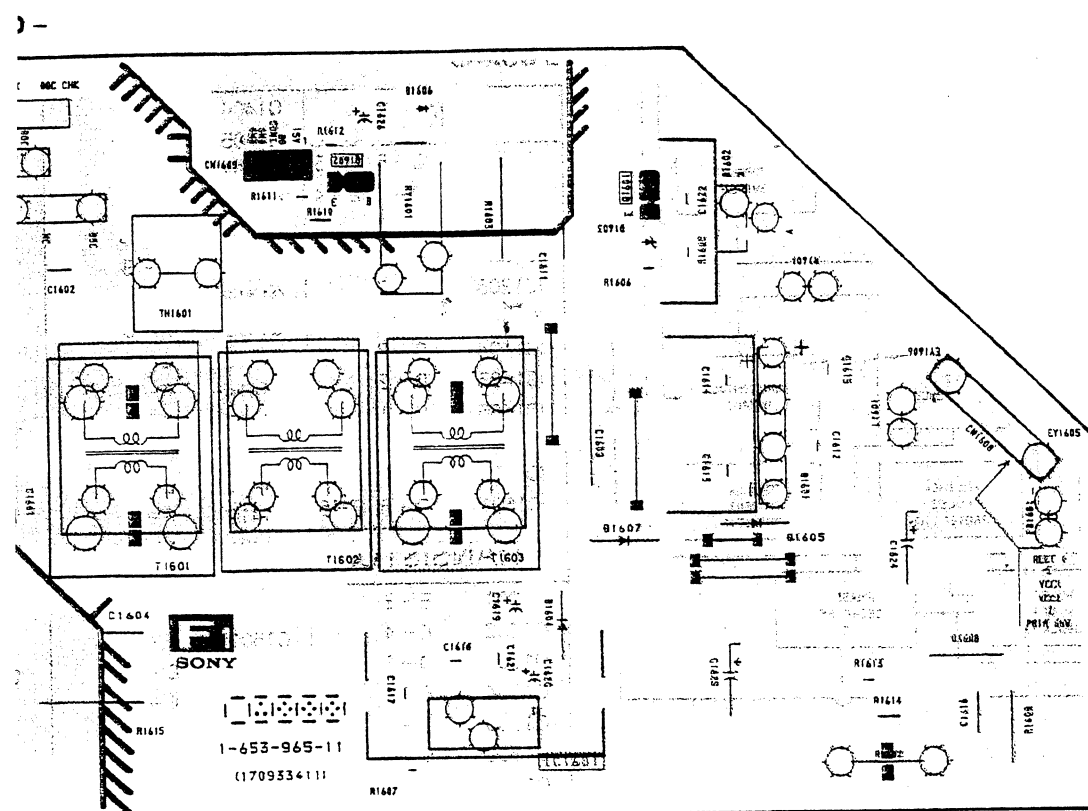


- H2 BOARD - (KV-W32MH11 / W32MN11)

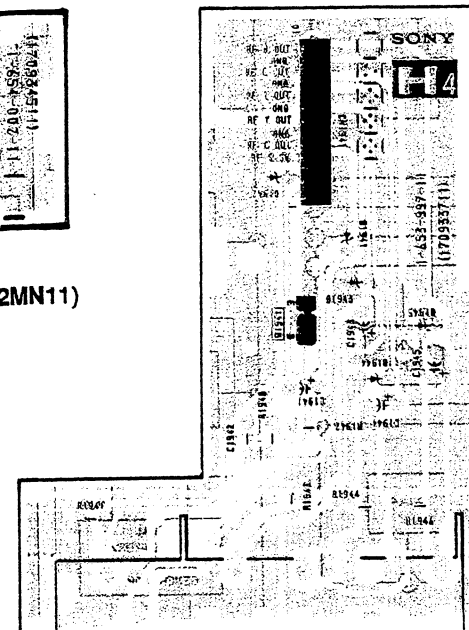
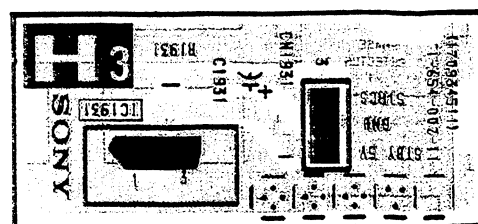


KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

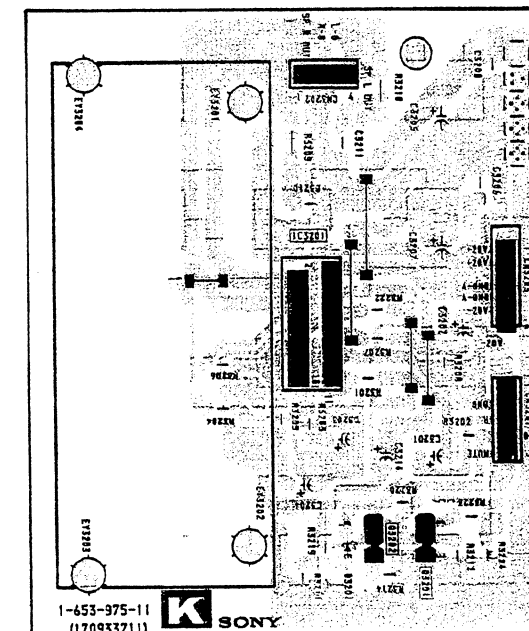
2 [CONTROL SW] **H3** [SIRCS RECEIVE] **H4** [AUDIO/VIDEO IN] **K** [AUDIO AMP] **VM** [VM AMP]



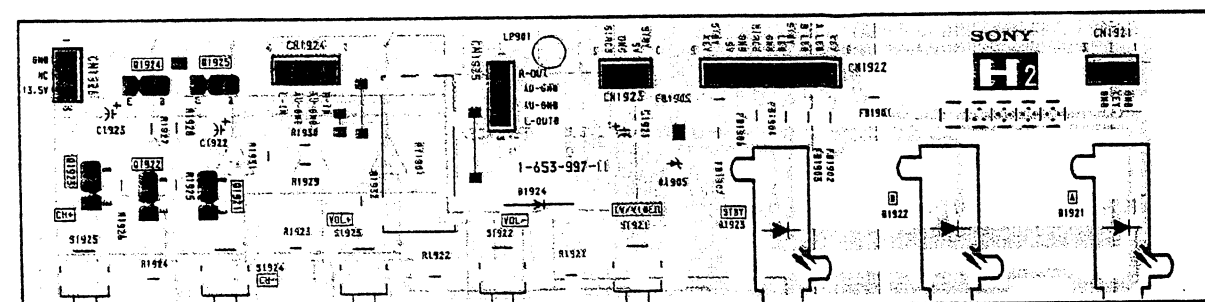
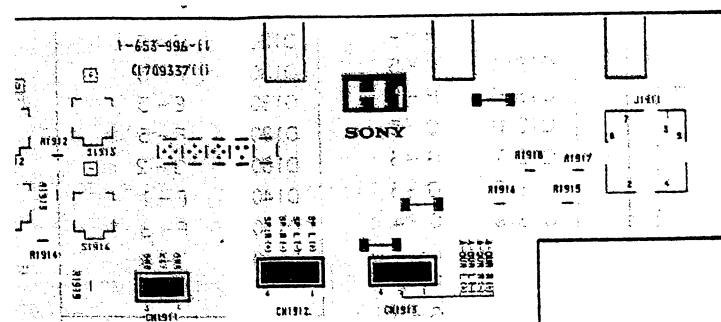
- H4 BOARD -



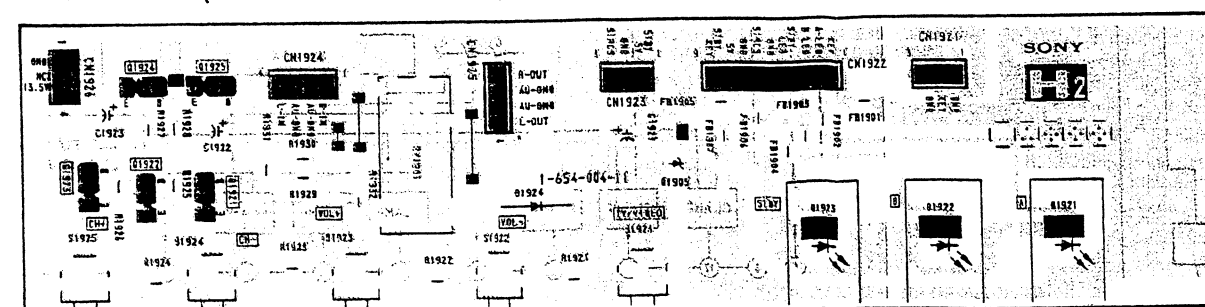
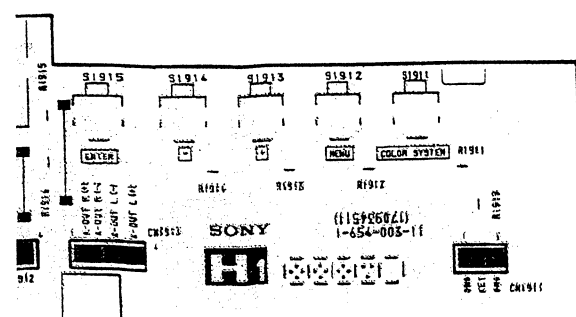
- K BOARD -



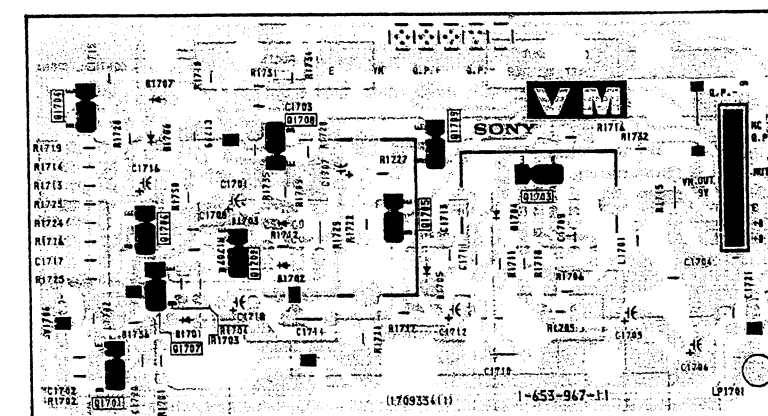
- H2 BOARD - (KV-W28MH11 / W28MN11)



- H2 BOARD - (KV-W32MH11 / W32MN11)



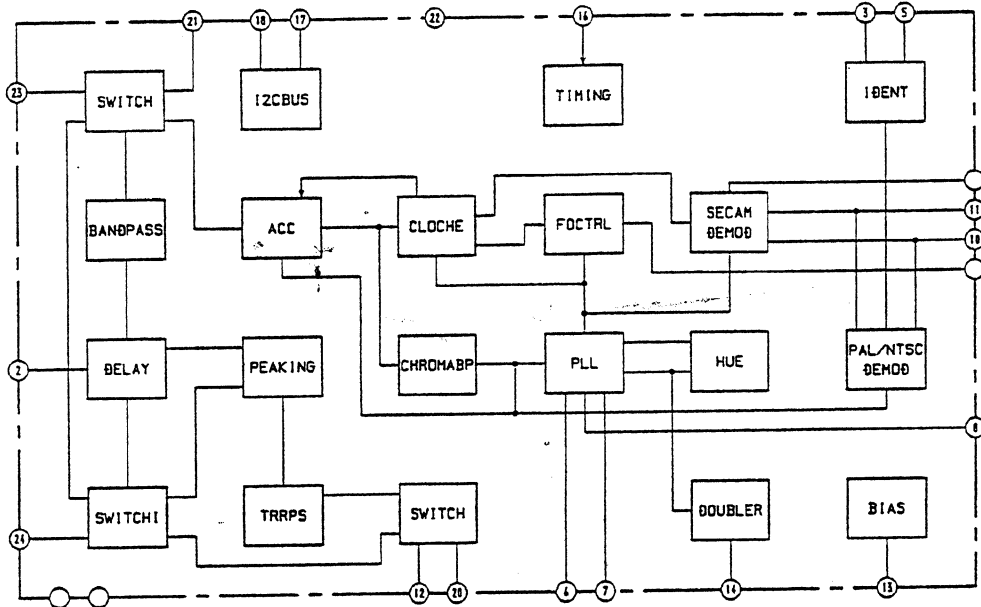
α - VM BOARD -



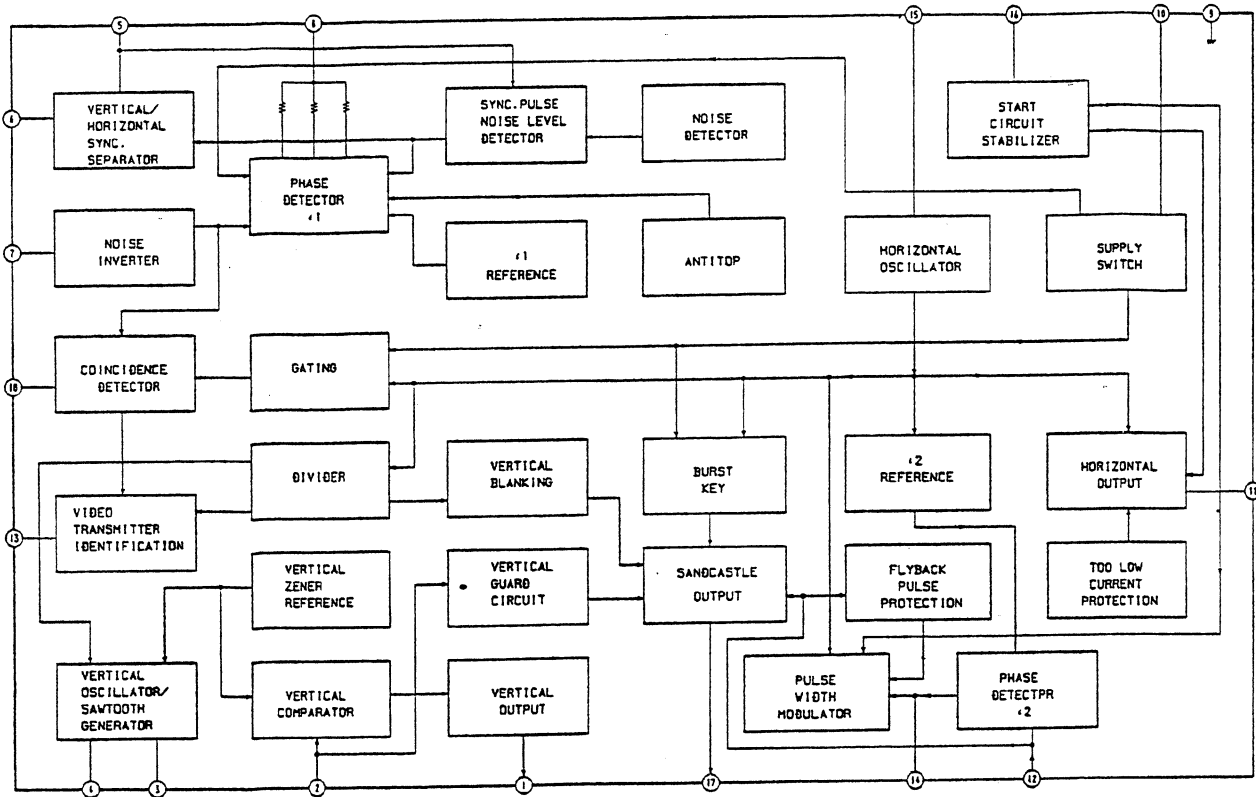
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

B BOARD IC1302 TDA9145/N2B



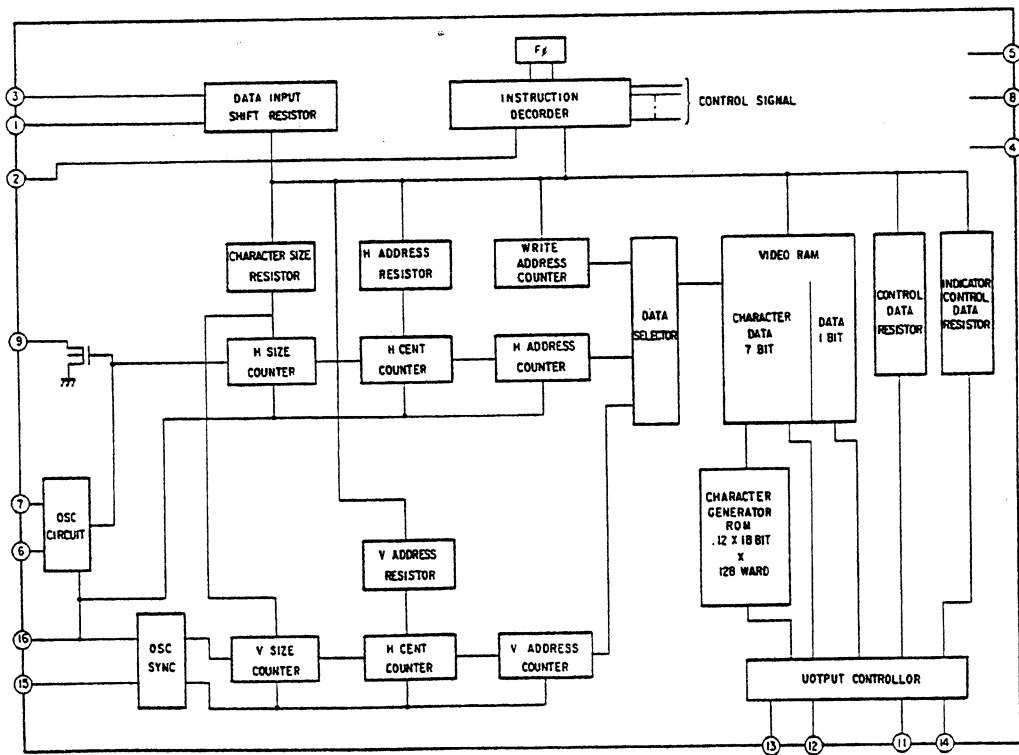
B BOARD IC1501 TDA2579B



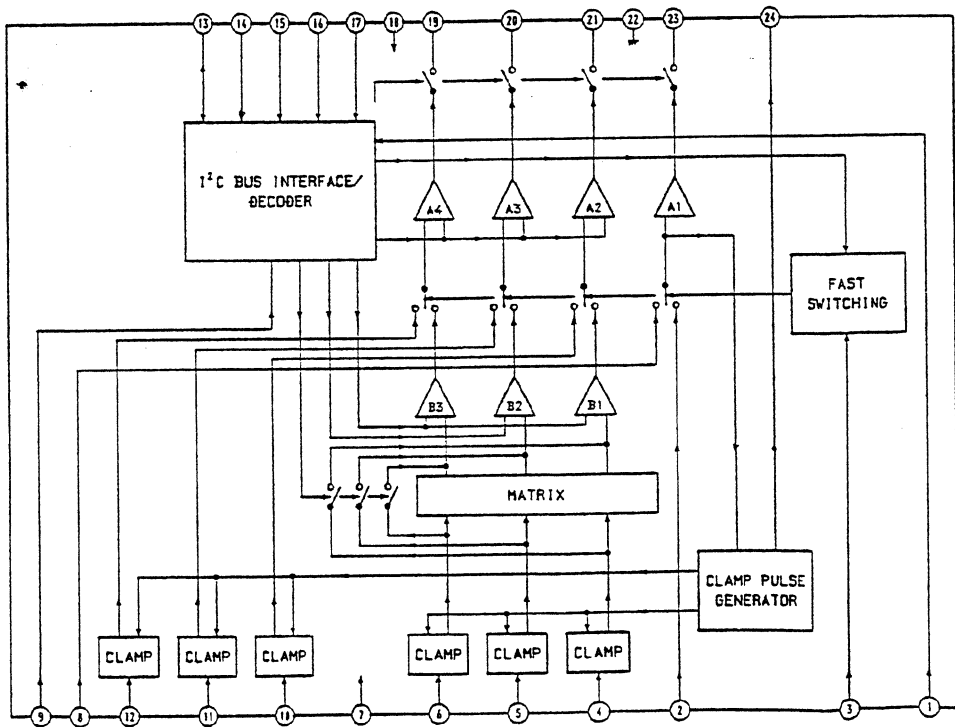
B BOARD

IC		
IC1301	C-5, F-5	Q1404 G-3
IC1302	D-4, E-4	Q1405 F-3
IC1303	B-4	Q1407 E-3
IC1304	B-5	Q1408 D-3
IC1305	B-2	Q1409 D-3
IC1401	B-3, G-3	Q1410 F-3
IC1404	D-2	Q1411 G-2
IC1405	D-2	Q1412 F-3
IC1406	D-1	Q1413 G-2
IC1407	B-2, G-2	Q1414 F-1
IC1408	B-1, G-1	Q1415 C-1
IC1501	D-6, E-6	Q1416 C-1
		Q1417 E-1
		Q1418 F-1
		Q1421 F-3
		Q1422 C-2
		Q1423 C-1
		Q1501 F-6
		Q1502 C-5
		Q1505 E-6
		Q1506 E-6
		Q1507 F-5
		Q1508 E-6
TRANSISTOR		
Q1301	E-3	
Q1302	E-4	
Q1303	D-3	
Q1304	E-3	
Q1305	C-4	
Q1306	D-5	
Q1307	F-5	
Q1308	C-5	
Q1309	G-6	
Q1310	G-5	
Q1311	G-5	
Q1312	H-4	
Q1314	H-5	
Q1315	H-5	
Q1316	G-5	
Q1317	G-6	
Q1318	G-5	
Q1319	C-4	
Q1320	E-4	
Q1323	F-2	
Q1324	G-5	
Q1325	G-5	
Q1401	F-3	
Q1402	C-3	
Q1403	G-3	
DIODE		
D1301	B-4	
D1302	E-4	
D1303	E-5	
D1304	F-5	
D1305	E-5	
D1307	F-5	
D1309	G-2	
D1401	F-1	
D1402	F-3	
D1501	F-4	
D1502	F-4	
VARIABLE RESISTOR		
RV1501	D-5	

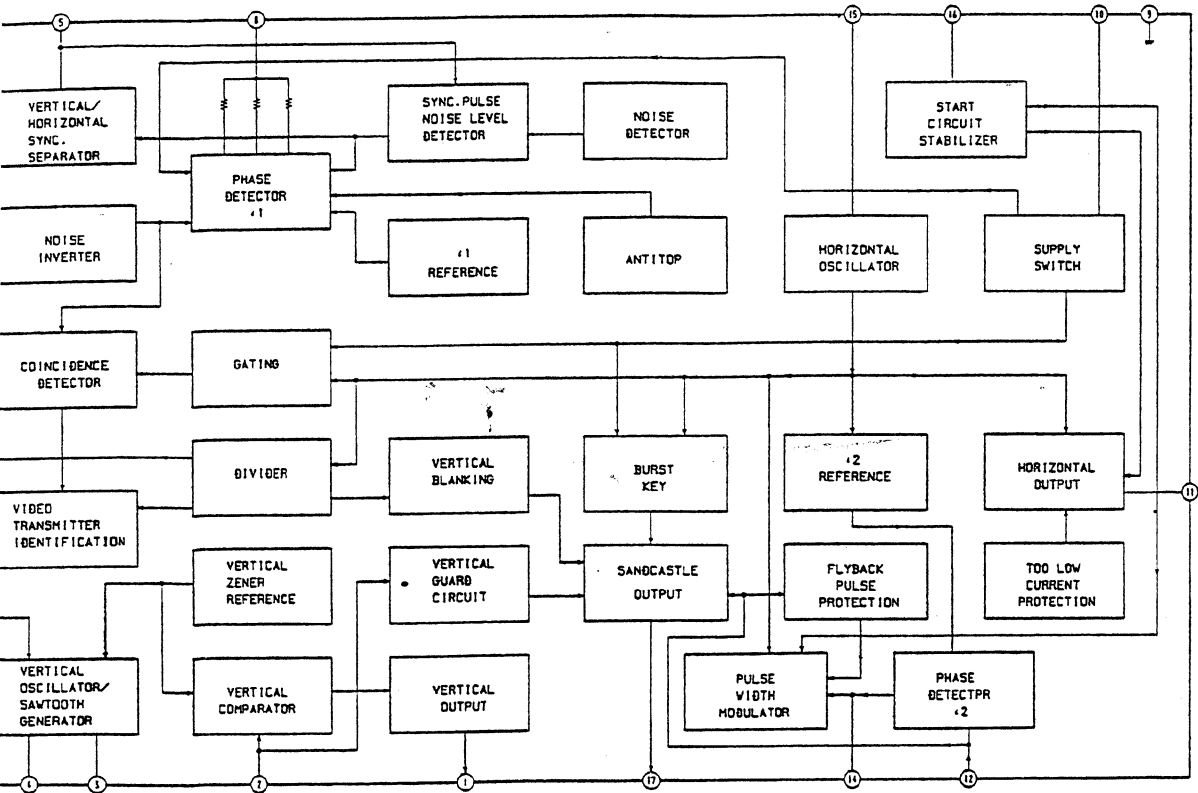
B BOARD IC1305 μ PD6456



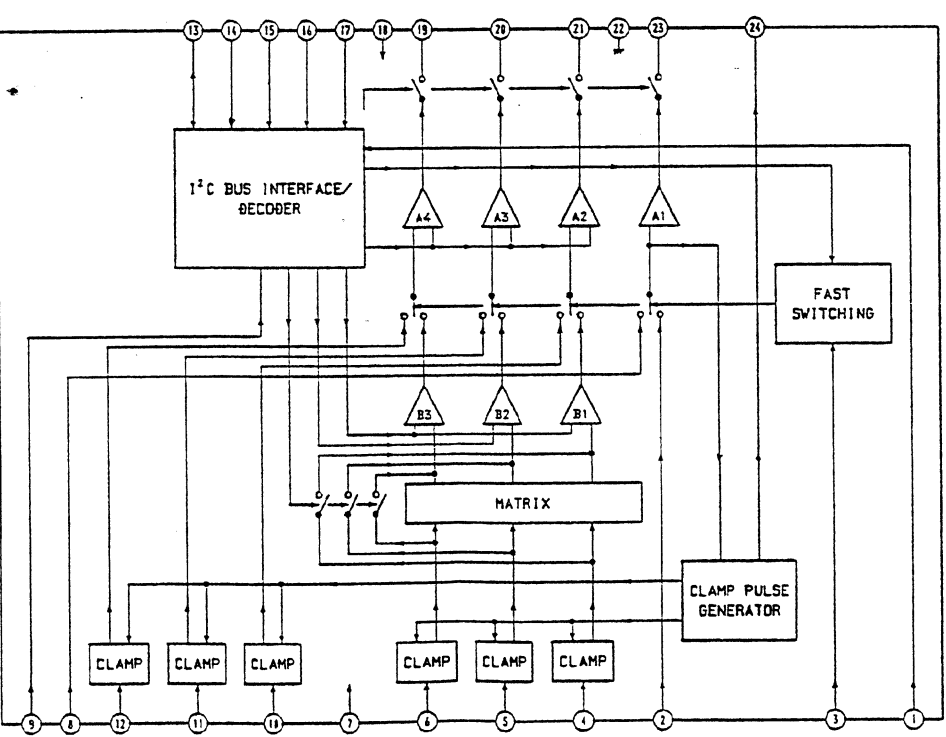
B BOARD IC1401 TDA8443B



OARD IC1501 TDA2579B



B BOARD IC1401 TDA8443B



KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

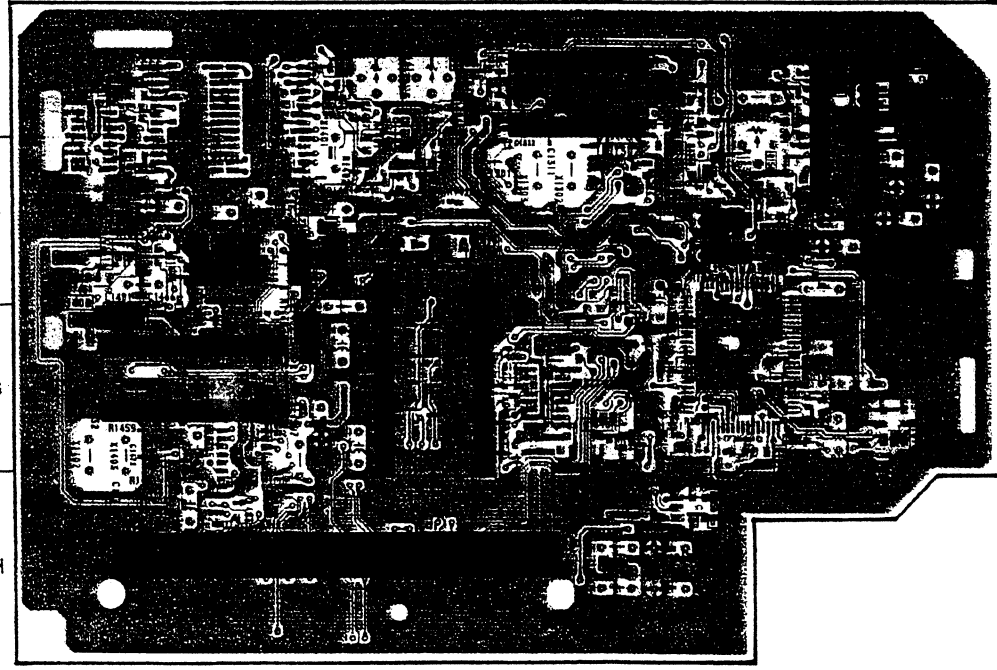
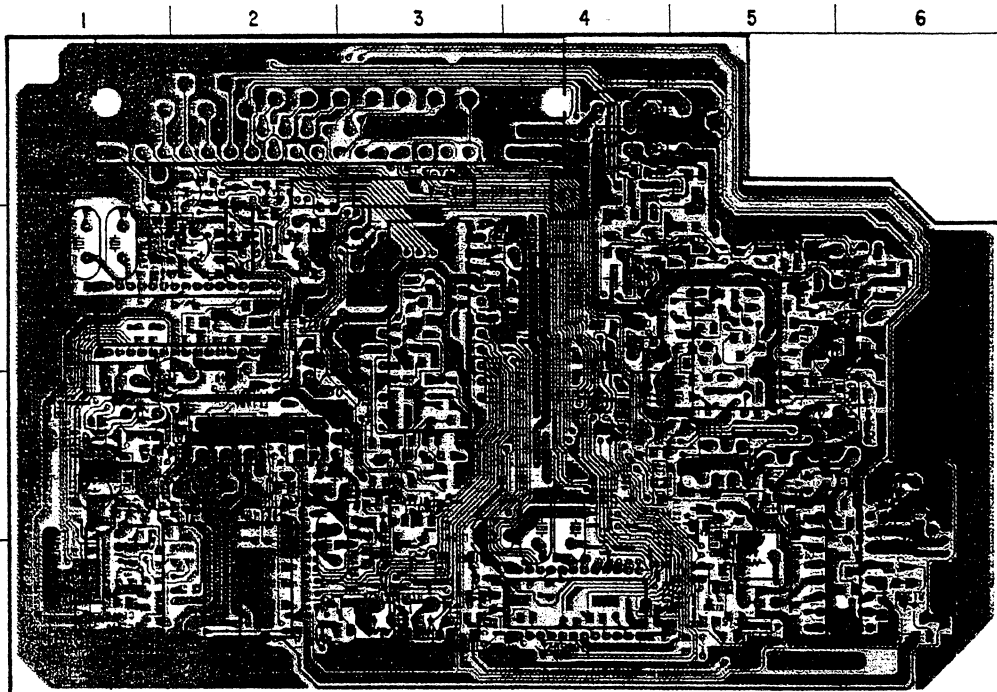
B

CHROMA DECODER,
1H DELAY, P IN P,
3D-Y/C-SEP, R. G. B SW

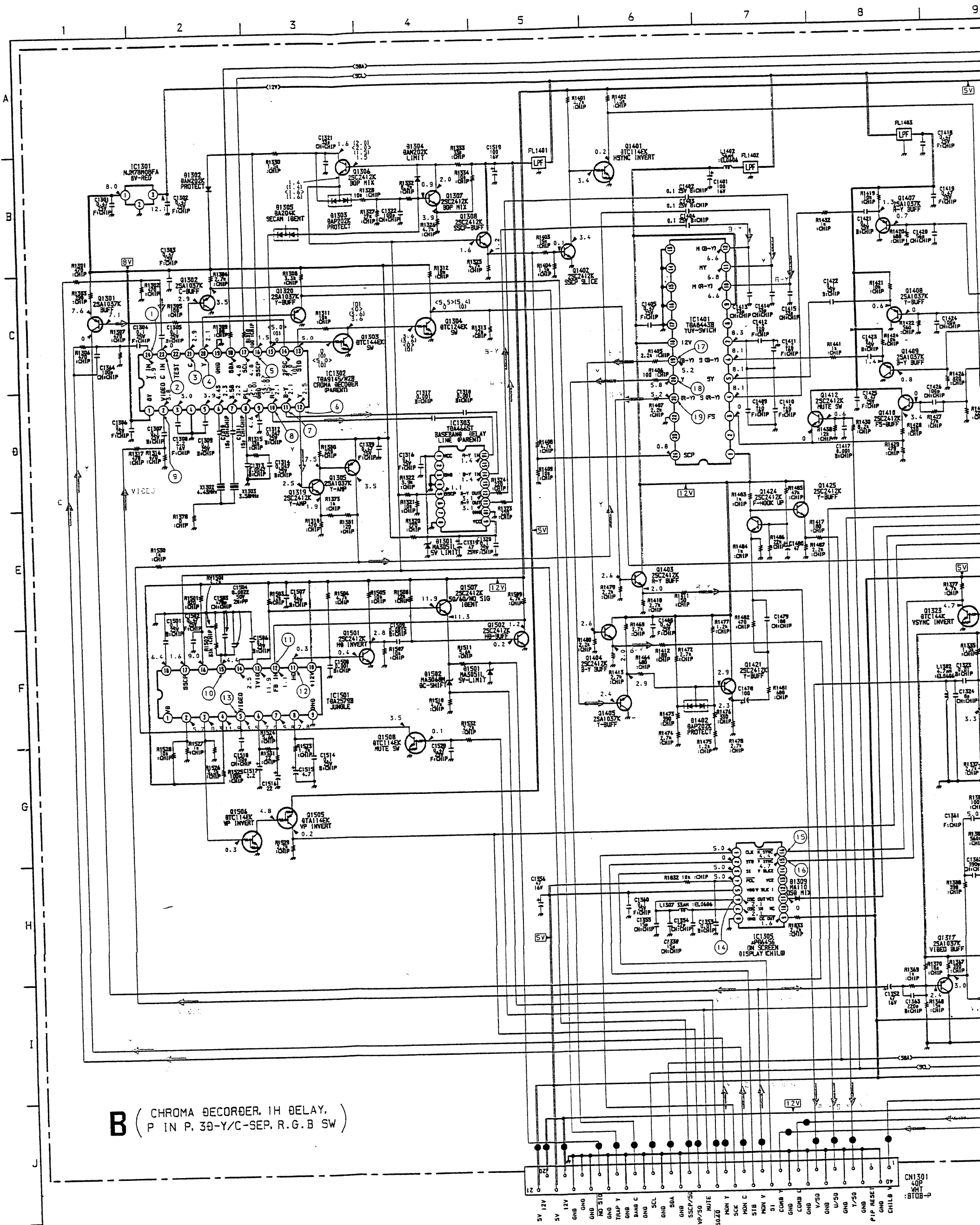
- B BOARD -

B BOARD

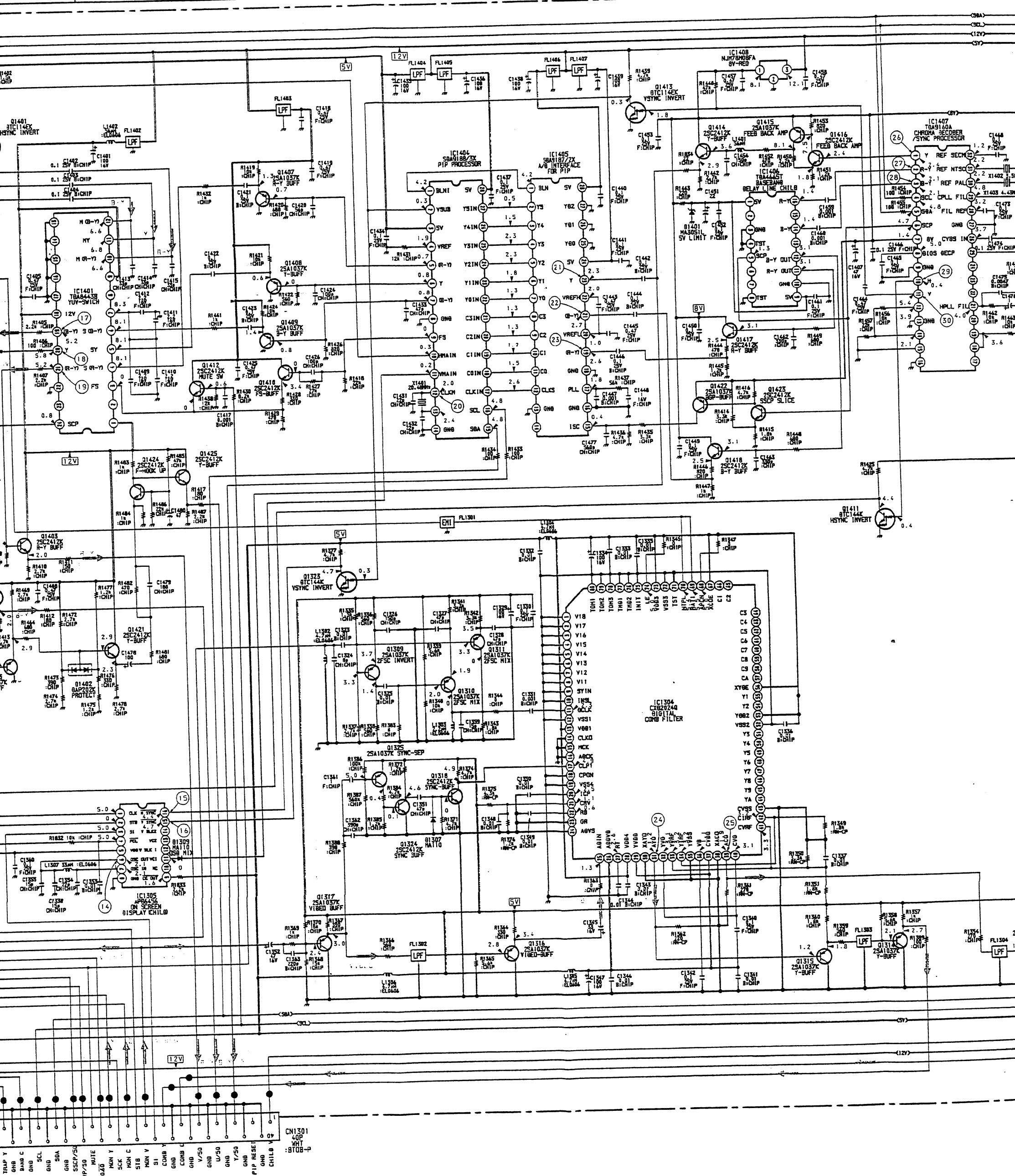
IC			
IC1301	C-5, F-5	Q1404	G-3
IC1302	D-4, E-4	Q1405	F-3
IC1303	B-4	Q1407	E-3
IC1304	B-5	Q1408	D-3
IC1305	B-2	Q1409	D-3
IC1401	B-3, G-3	Q1410	F-3
IC1404	D-2	Q1411	G-2
IC1405	D-2	Q1412	F-3
IC1406	D-1	Q1413	G-2
IC1407	B-2, G-2	Q1414	F-1
IC1408	B-1, G-1	Q1415	C-1
IC1501	D-6, E-6	Q1416	C-1
TRANSISTOR		Q1417	E-1
Q1301	E-3	Q1418	F-1
Q1302	E-4	Q1421	F-3
Q1303	D-3	Q1422	C-2
Q1304	E-3	Q1423	C-1
Q1305	C-4	Q1501	F-6
Q1306	D-5	Q1502	C-5
Q1307	F-5	Q1505	E-6
Q1308	C-5	Q1506	E-6
Q1309	G-6	Q1507	F-5
Q1310	G-5	Q1508	E-6
Q1311	G-5	DIODE	
Q1312	H-4	D1301	B-4
Q1314	H-5	D1302	E-4
Q1315	H-5	D1303	E-5
Q1316	G-5	D1304	F-5
Q1317	G-6	D1305	E-5
Q1318	G-5	D1307	F-5
Q1319	C-4	D1309	G-2
Q1320	E-4	D1401	F-1
Q1323	F-2	D1402	F-3
Q1324	G-5	D1501	F-4
Q1325	G-5	D1502	F-4
Q1401	F-3	VARIABLE RESISTOR	
Q1402	C-3	RV1501	D-5
Q1403	G-3		

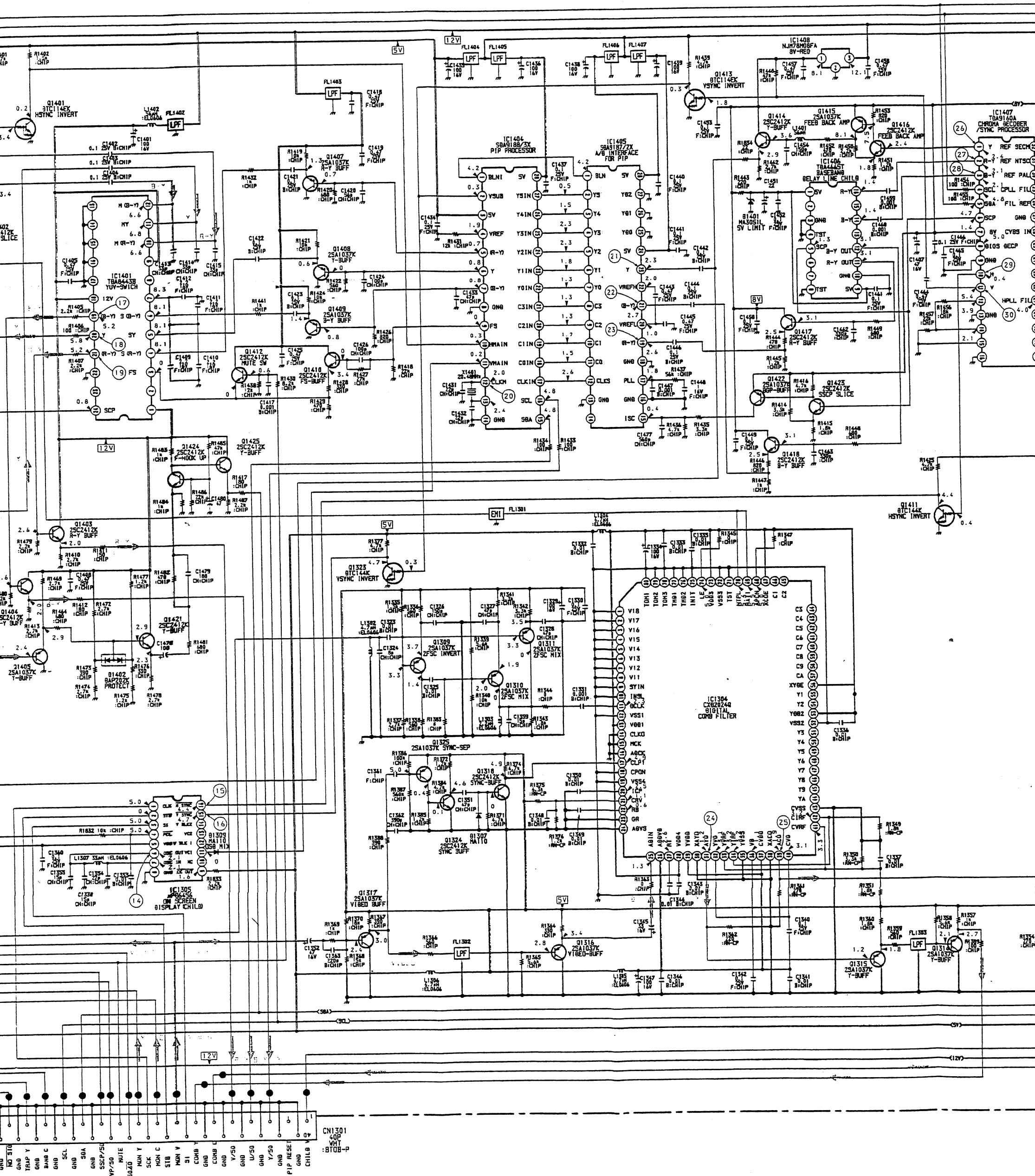


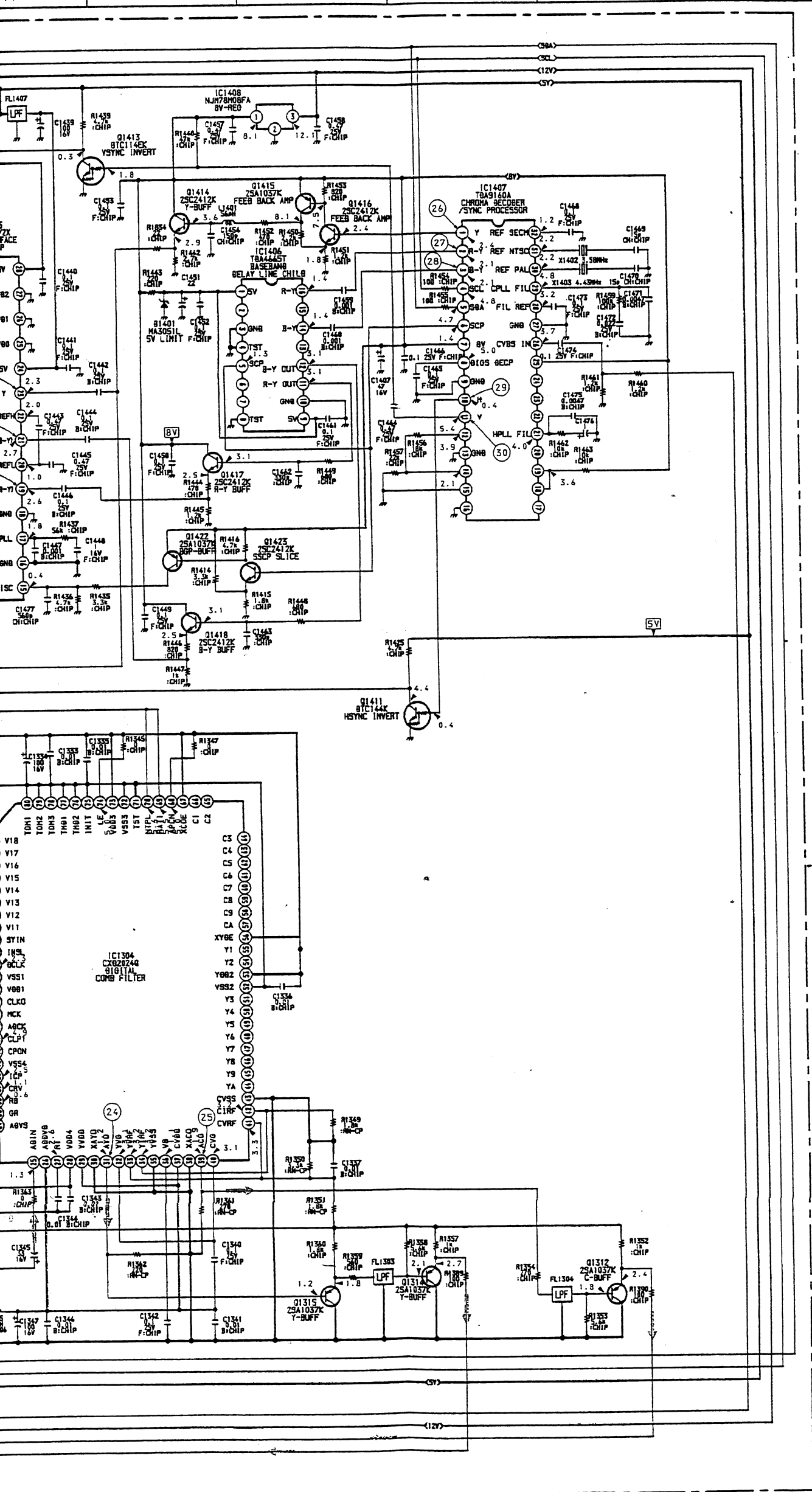
Note:
• : Pattern from the side which enables seeing.
• : Pattern of the rear side.



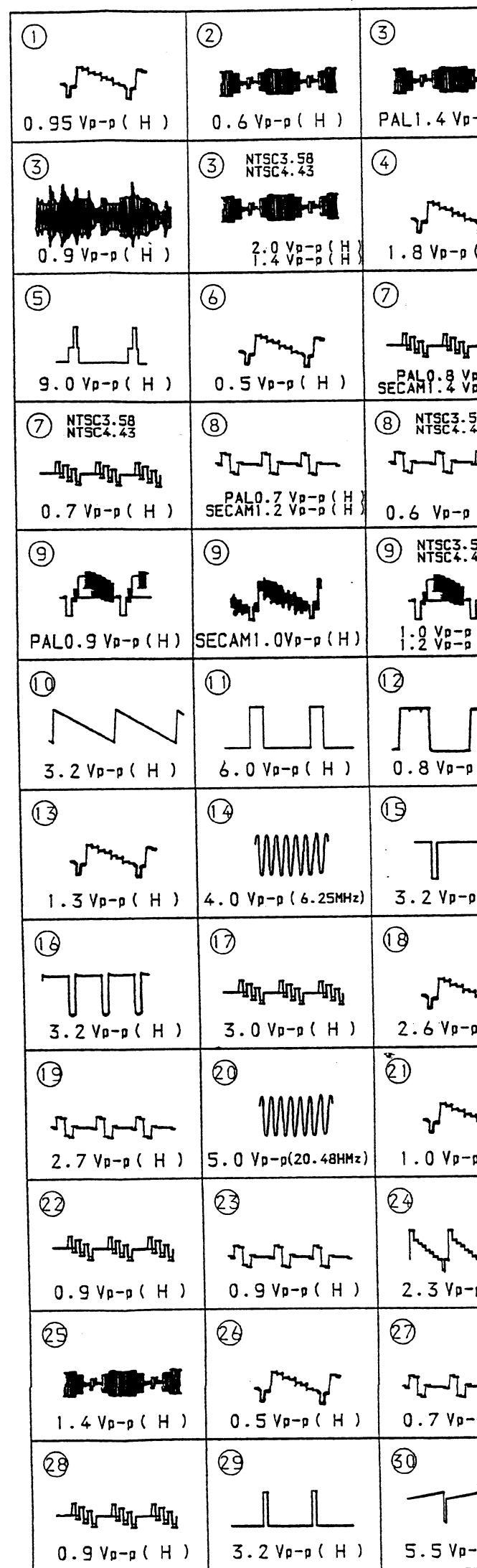
B (CHROMA DECODER, LH DELAY, P IN P, 30-Y/C-SEP, R.G.B SW)

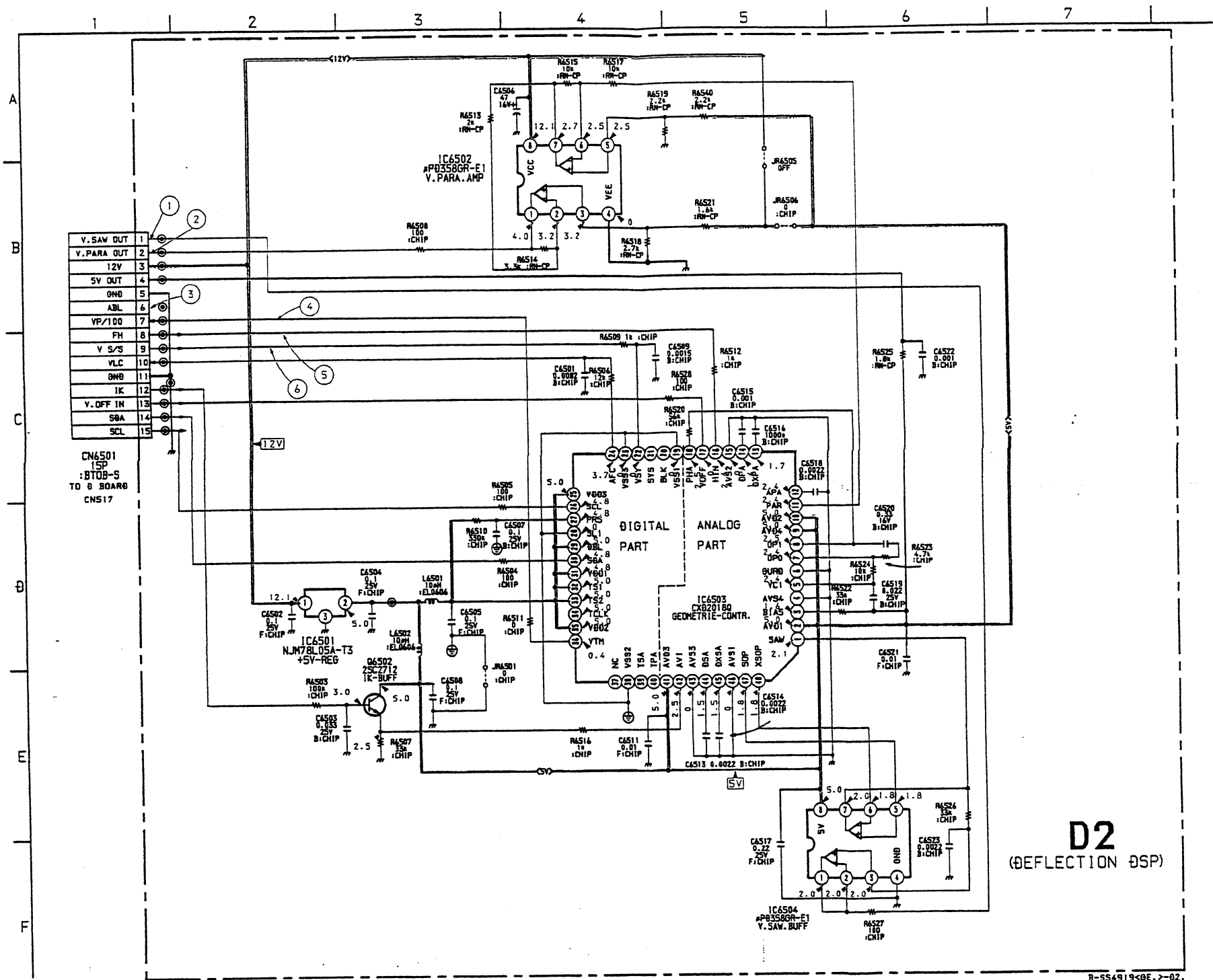




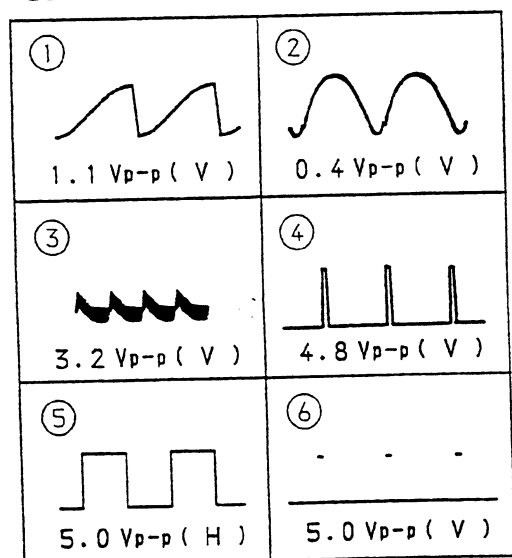


• B BOARD WAVEFORMS

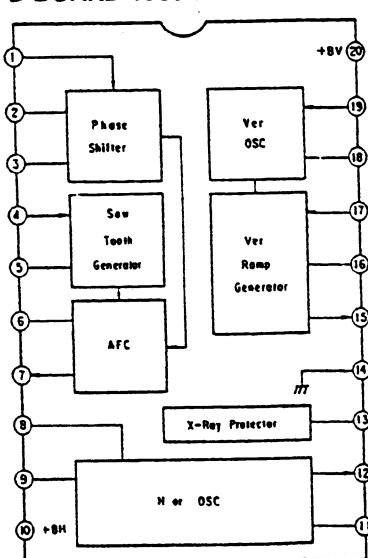




D2 BOARD WAVEFORMS



D BOARD IC502 LA7856A

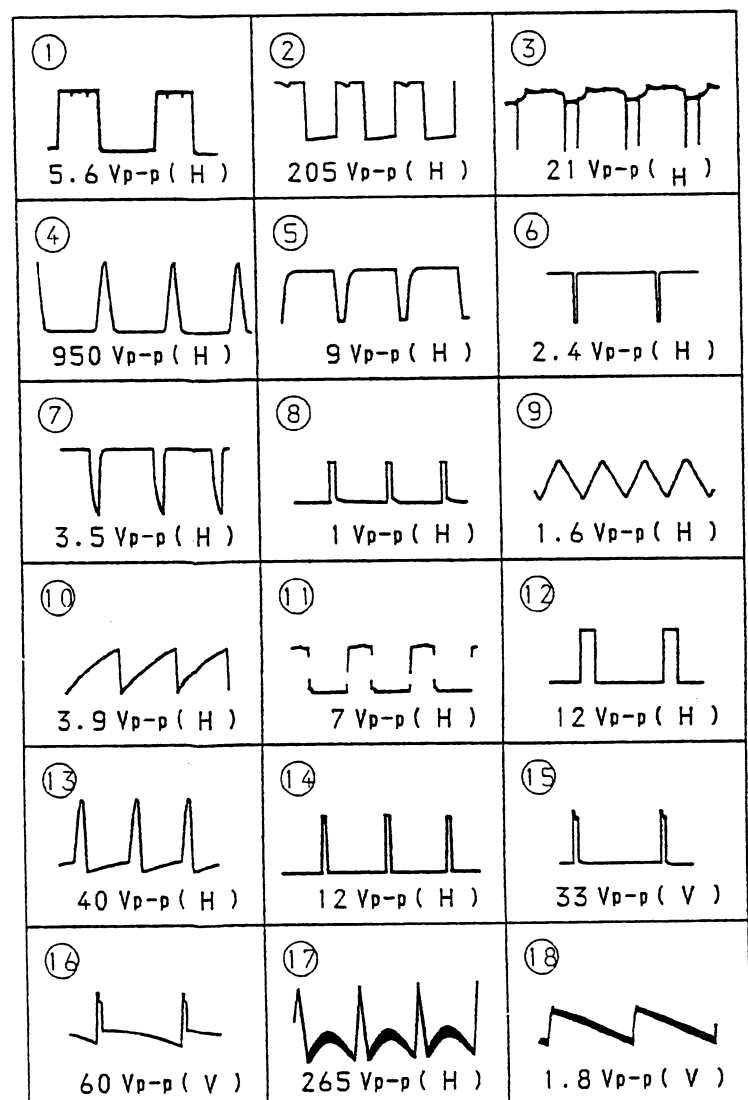


D BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
C3553	H - 10	0.0027 630V	0.0033 630V
R503	F - 9	CONDUCTOR	0
R504	F - 10	1M	470k
R538	F - 9	470k	330k
R2525	H - 1	CONDUCTOR	0
T504	B - 10	PMT	-

○: TO BE MOUNT
-: NOT MOUNT

D BOARD WAVEFORMS

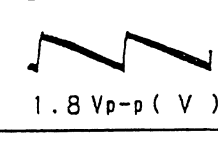


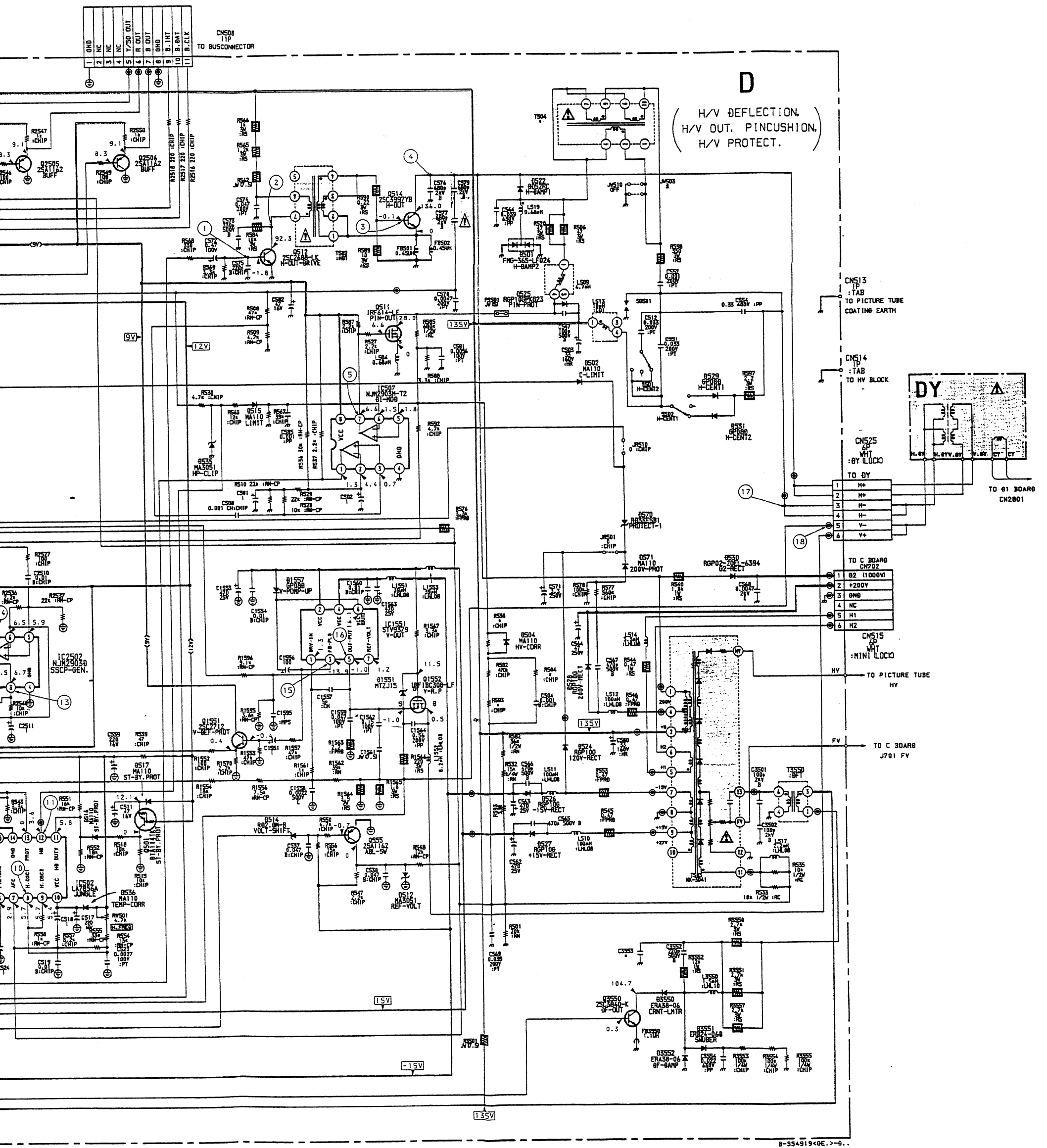
Schematic diagram

← B board

Schematic diagrams

D2 D boards →





KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

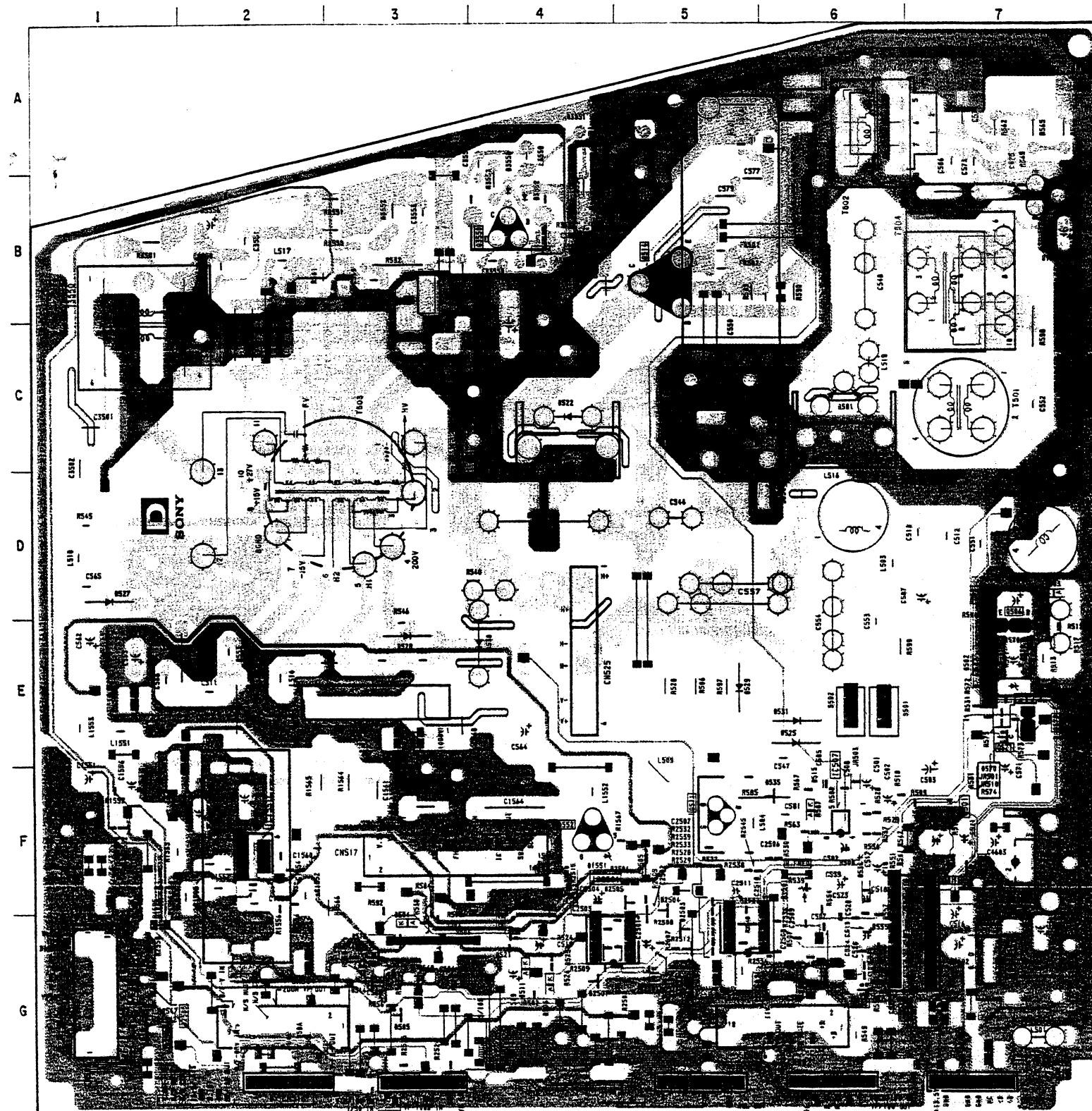
D H/V DEFLECTION,
H/V OUT, PINCUSHION,
H/V PROTECT

D2 [DEFLECTION DSP]

Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

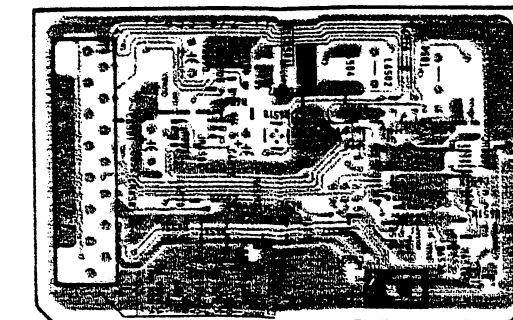
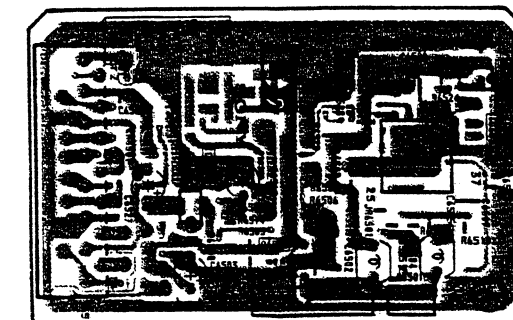
- D BOARD -



D BOARD

IC		Q2503 G-5		D525 E-5	
IC502	G-7	Q2504	G-1	D526	E-2
IC507	F-6	Q2505	G-1	D527	D-1
IC1551	F-2	Q2506	G-1	D528	E-3
IC2501	G-4	Q3550	B-4	D529	E-5
IC2502	G-5	DIODE		D530	E-4
IC4601	G-7	D501	C-6	D531	E-5
IC4602	F-7	D502	E-7	D535	F-6
TRANSISTOR		D503	D-7	D570	E-7
Q501	F-7	D504	G-3	D571	E-7
Q502	G-6	D506	G-4	D1551	F-4
Q506	E-7	D508	F-7	D1557	F-1
Q507	G-4	D509	F-7	Q2501	G-4
Q508	F-4	D511	G-4	D2503	G-5
Q511	F-5	D512	G-3	D2504	F-5
Q512	B-7	D514	G-3	D2505	F-5
Q514	B-5	D515	F-6	D3550	B-4
Q555	G-3	D516	F-7	D3551	A-4
Q1551	F-1	D517	F-7	D3552	B-4
Q1552	F-4	D522	C-4		
Q2501	G-5	D524	E-2		

- D2 BOARD -



Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

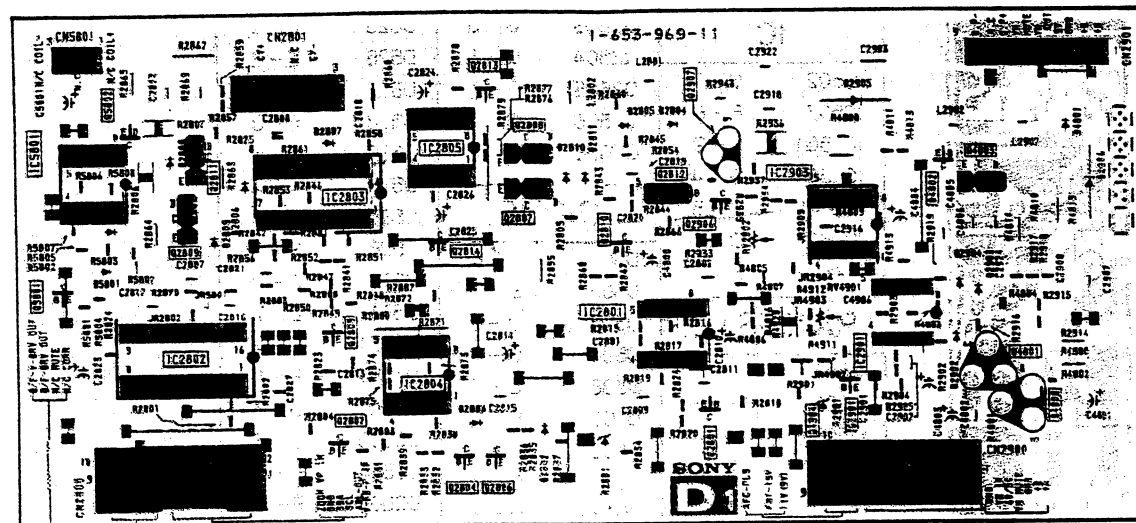
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

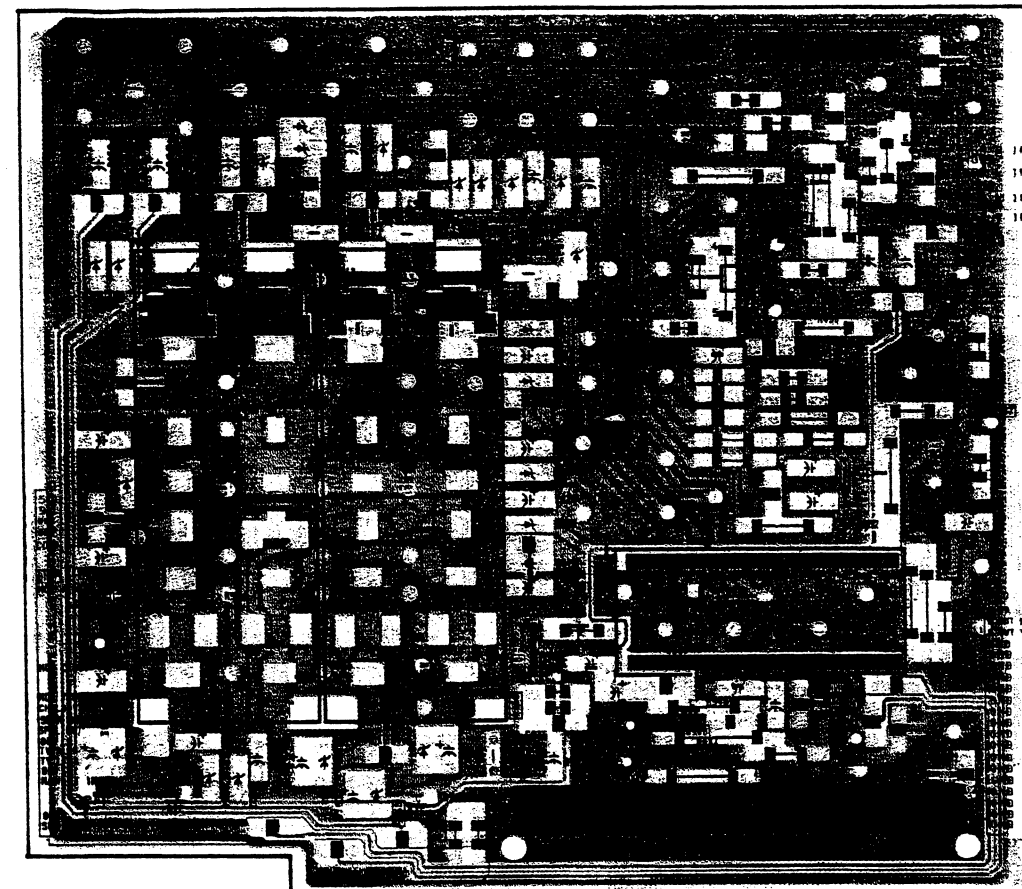
D1 [DYNAMIC CONVERGENCE,
QUADRA POLE, DF DRIVE,
PICTURE ROTATION]

J [AUDIO/VIDEO SW,
AUDIO/VIDEO IN/OUT]

- D1 BOARD -



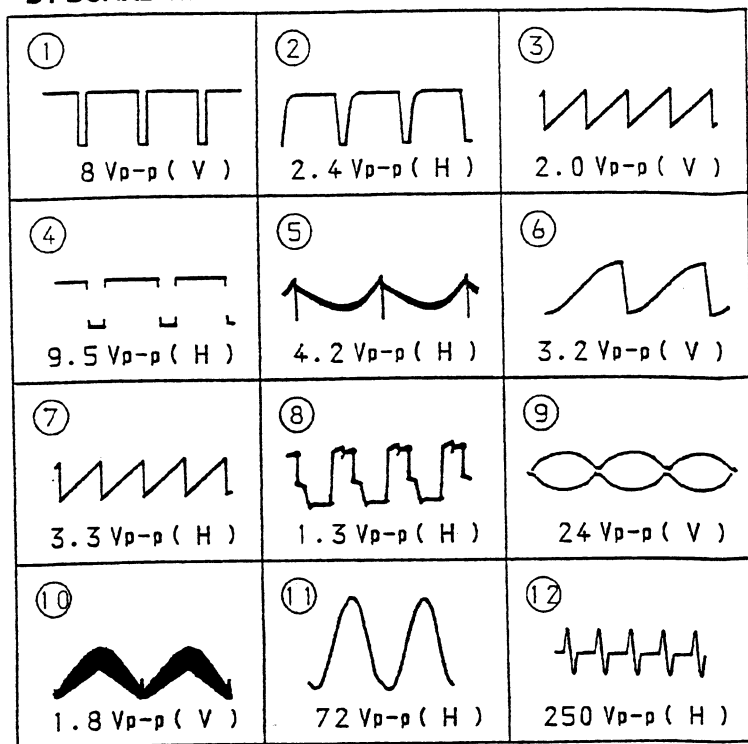
- J BOARD -



Note :

- [Pattern from the side which enables seeing.]
- [Pattern of the rear side.]

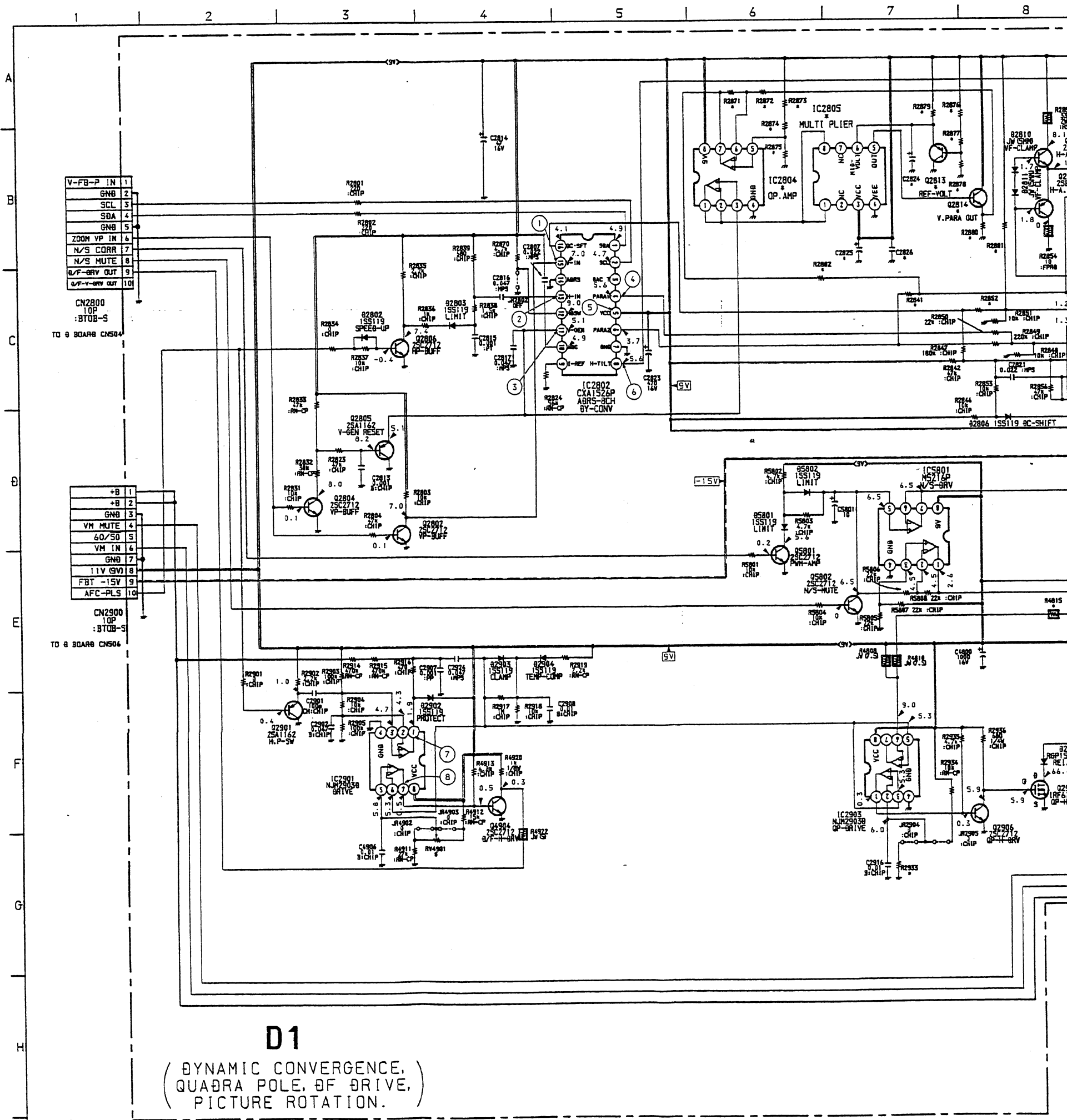
D1 BOARD WAVEFORMS



D1 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH	Ref. No.	Location	28 INCH	32 INCH
C2824	B-7	47 16V	-	R2871	A-6	39k	-
C2825	B-7	47 16V	-	R2872	A-6	10k	-
C2826	B-7	0.01	-	R2873	A-6	220	-
C2903	E-9	0.033 220V	0.022 200V	R2874	B-6	10k	-
C2922	F-9	0.0015 630V	0.001 630V	R2875	B-6	10k	-
				R2876	B-7	680	-
IC2804	B-6	μPC358C	-	R2877	B-7	10k	-
IC2805	B-7	CA0005AD	-	R2878	B-7	10k	-
				R2879	B-7	470 1/2W	-
Q2813	B-7	2SA1162	-	R2880	B-8	470 1/2W	-
Q2814	B-8	2SC2712	-	R2881	B-8	39k	-
				R2882	C-7	22k	-
R2841	C-7	22k	47k	R2933	G-7	20k	22k
R2852	C-8	47k	10k	R4815	E-8	33 3W	39 3W

○: TO BE MOUNT
-: NOT MOUNT



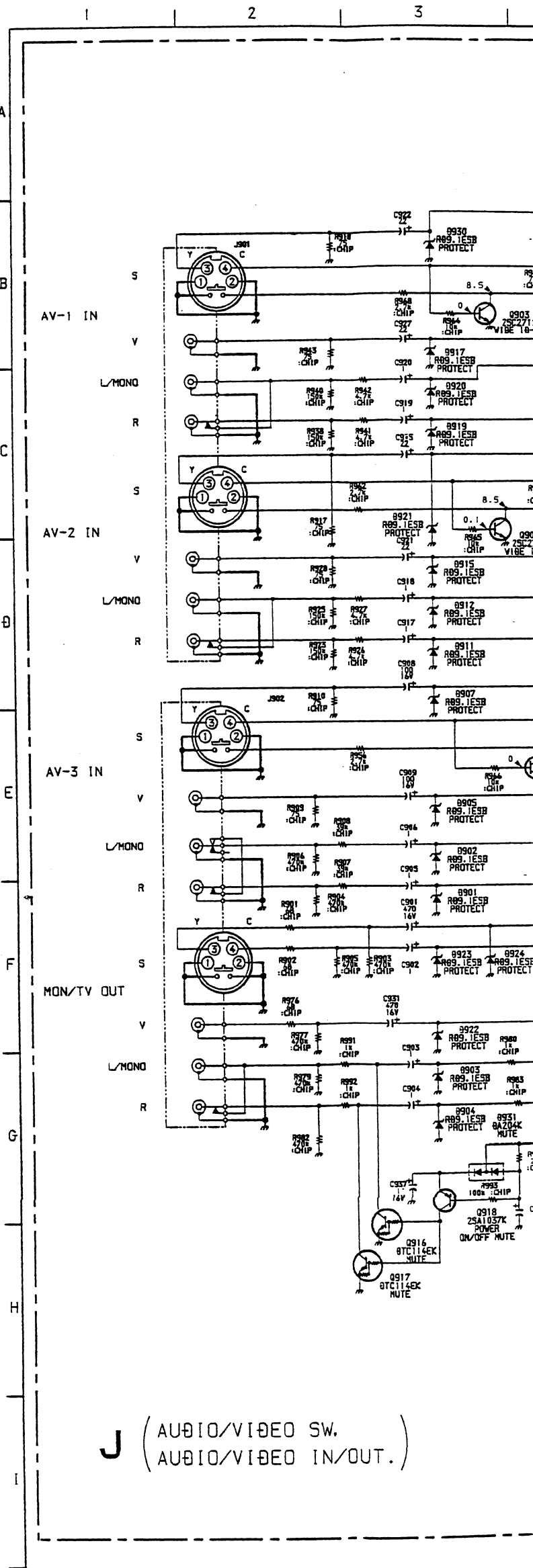
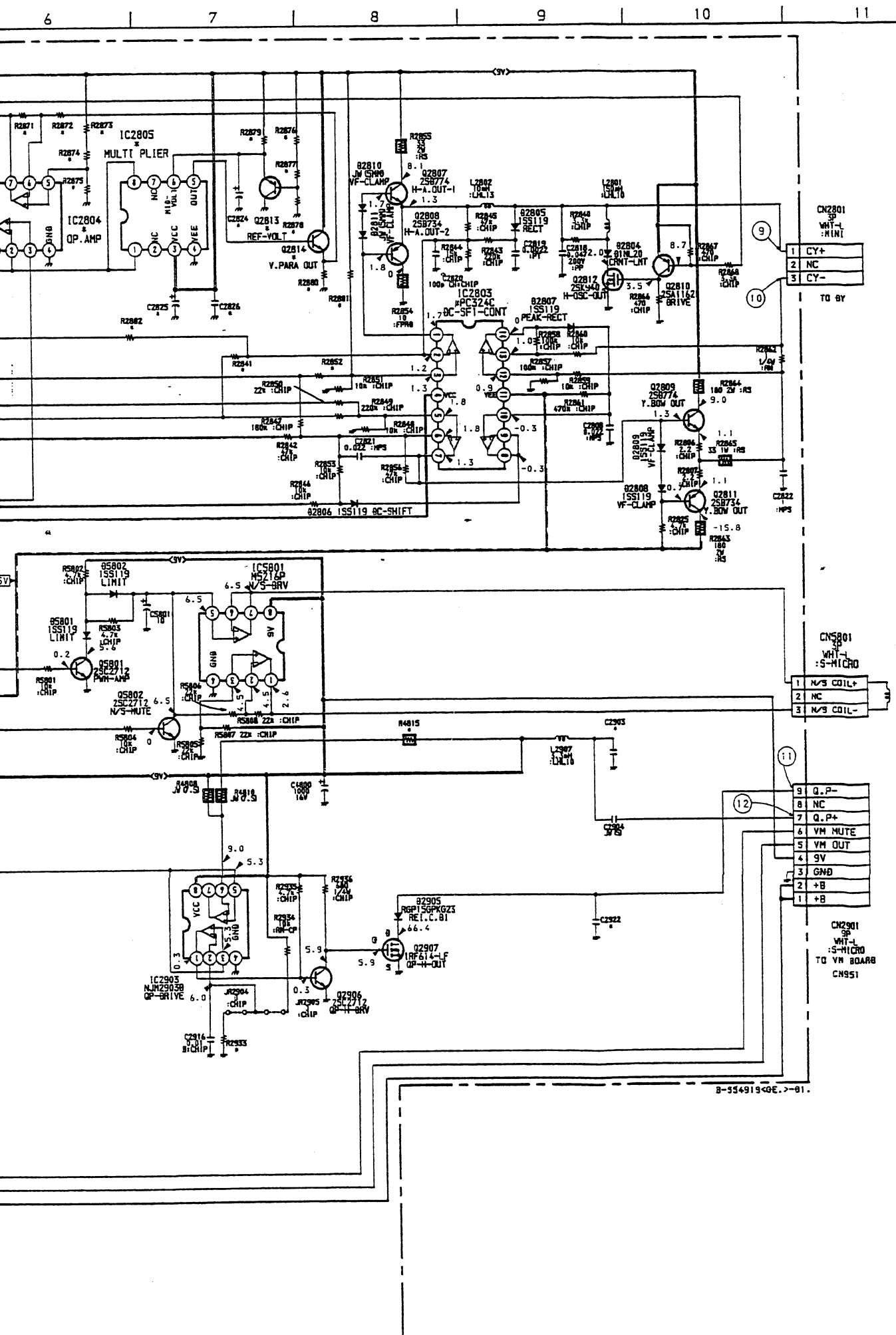
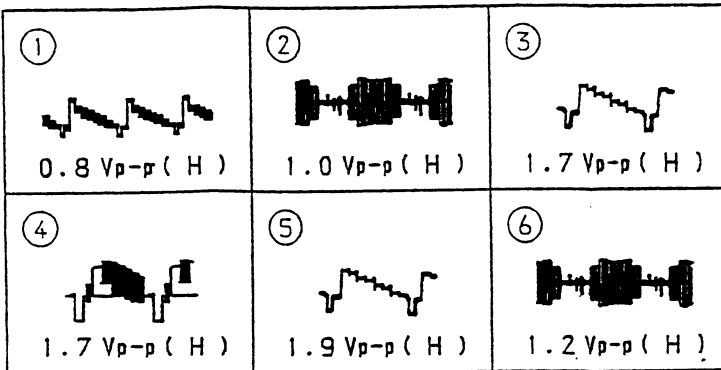
D1

(DYNAMIC CONVERGENCE,
QUADRA POLE, OF DRIVE,
PICTURE ROTATION.

Ref. No.	Location	28 INCH	32 INCH
R2871	A-6	39k	-
R2872	A-6	10k	-
R2873	A-6	220	-
R2874	B-6	10k	-
R2875	B-6	10k	-
R2876	B-7	680	-
R2877	B-7	10k	-
R2878	B-7	10k	-
R2879	B-7	470 1/2W	-
R2880	B-8	470 1/2W	-
R2881	B-8	39k	-
R2882	C-7	22k	-
R2933	G-7	20k	22k
R4815	E-8	33 3W	39 3W

○: TO BE MOUNT
 -: NOT MOUNT

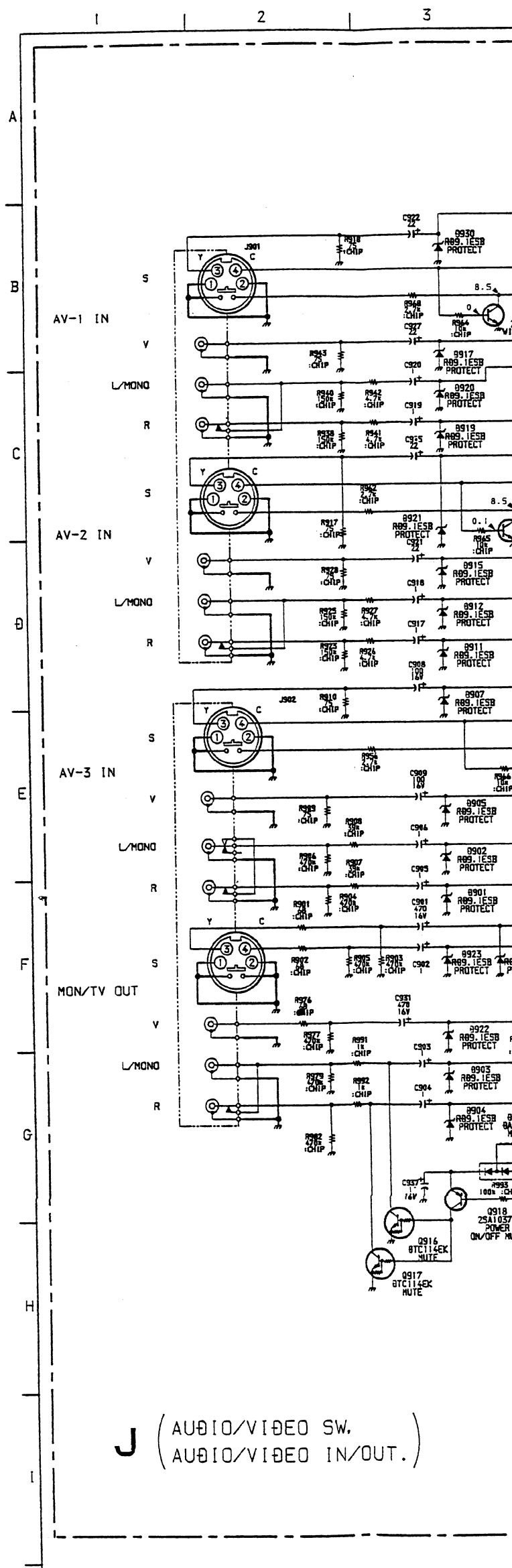
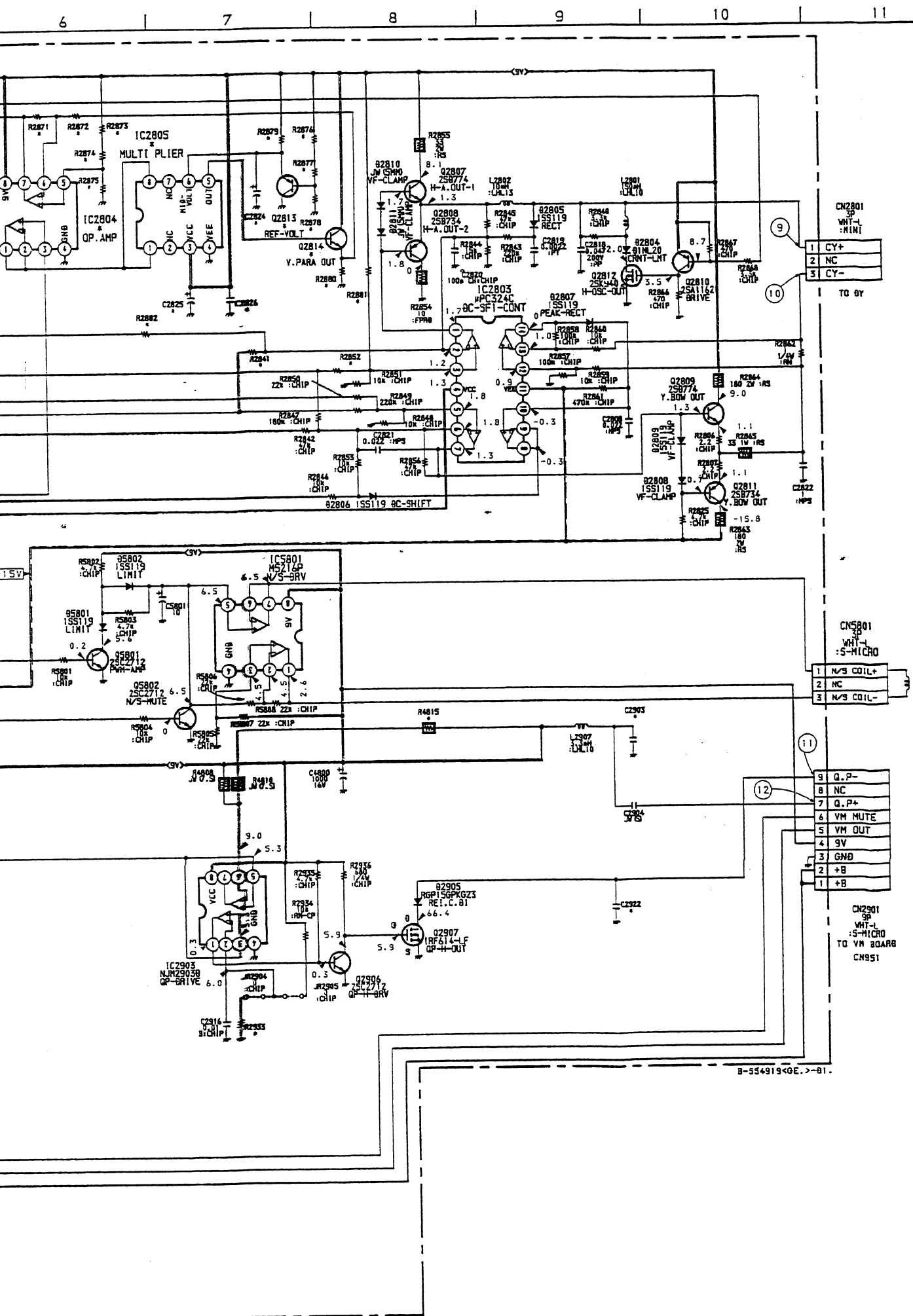
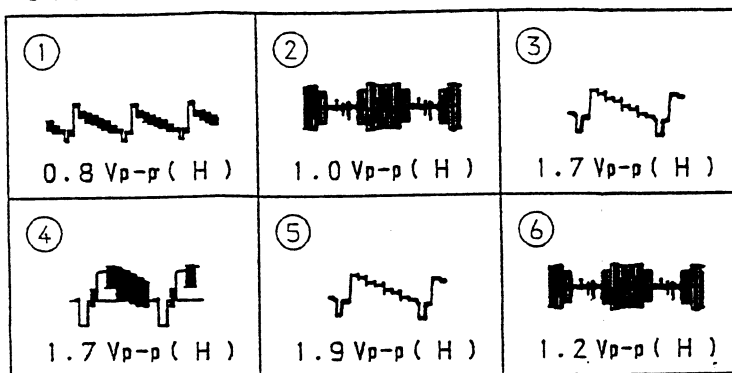
J BOARD WAVEFORMS



Ref. No.	Location	28 INCH	32 INCH
R2871	A-6	39k	-
R2872	A-6	10k	-
R2873	A-6	220	-
R2874	B-6	10k	-
R2875	B-6	10k	-
R2876	B-7	680	-
R2877	B-7	10k	-
R2878	B-7	10k	-
R2879	B-7	470 1/2W	-
R2880	B-8	470 1/2W	-
R2881	B-8	39k	-
R2882	C-7	22k	-
R2933	G-7	20k	22k
R4815	E-8	33 3W	39 3W

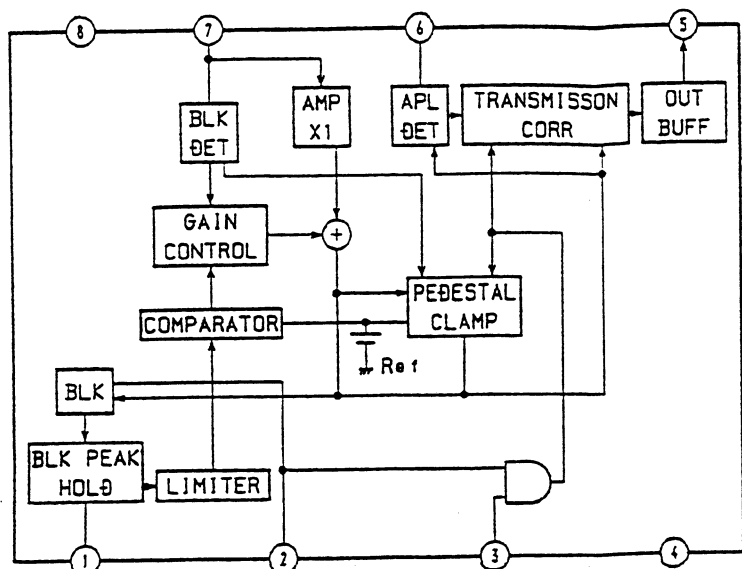
○: TO BE MOUNT
-: NOT MOUNT

• J BOARD WAVEFORMS

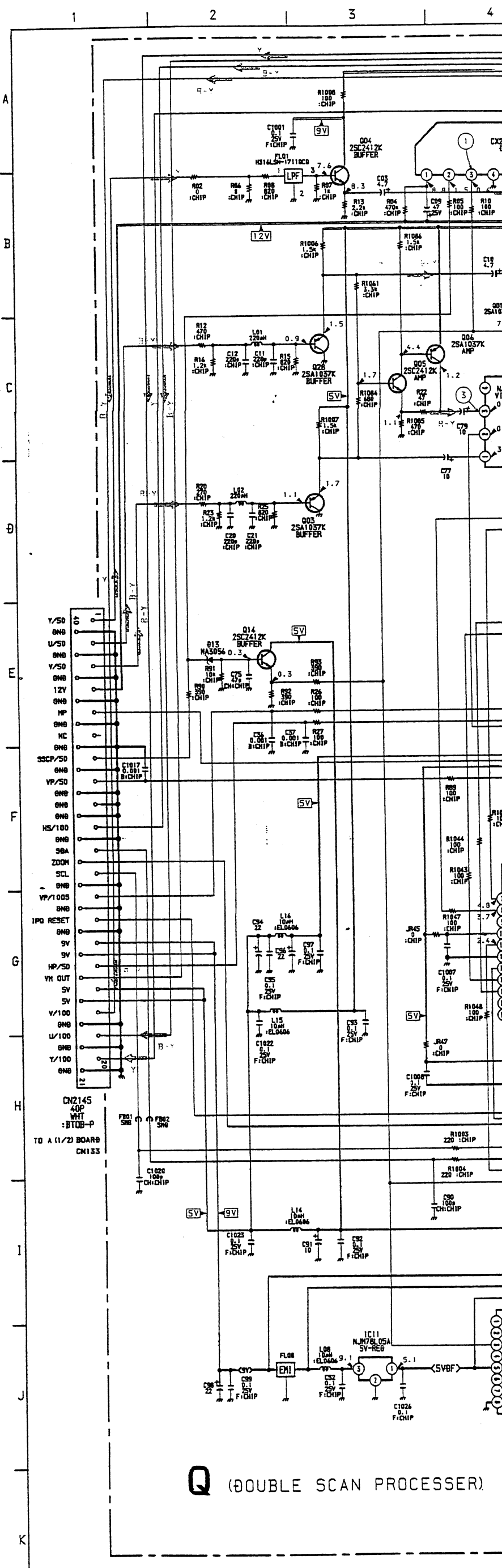
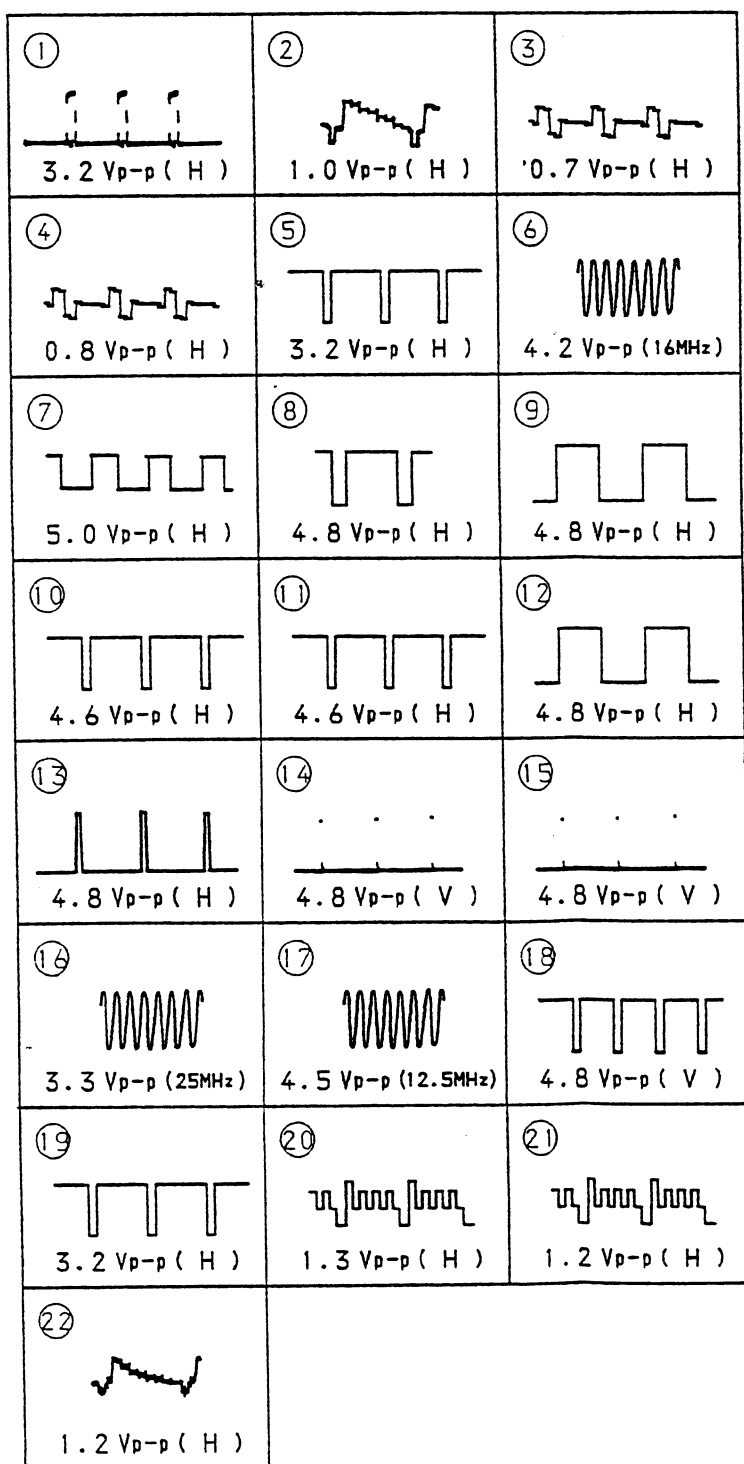


J (AUDIO/VIDEO SW.
AUDIO/VIDEO IN/OUT.)

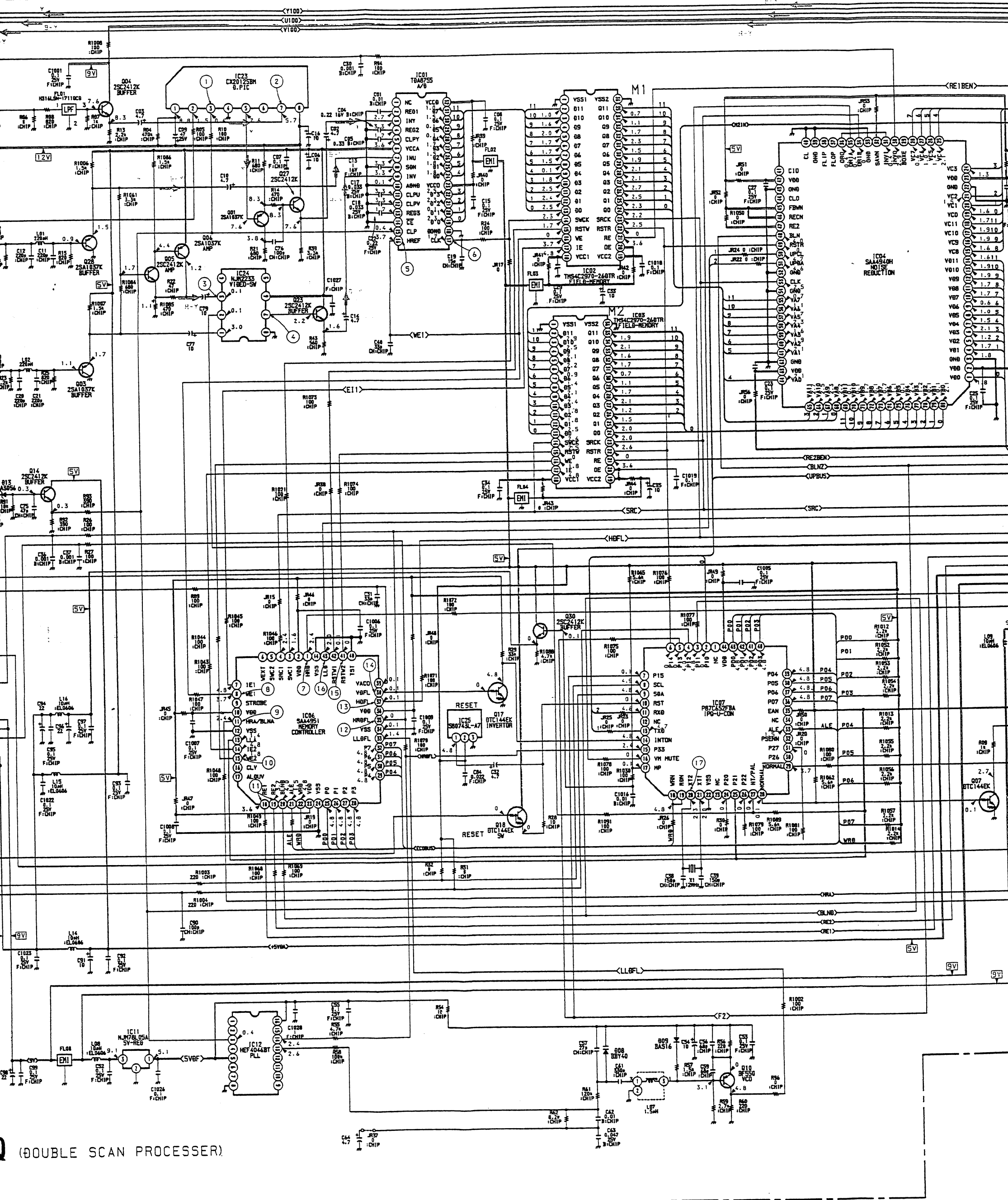
Q BOARD IC23 CX20125BM



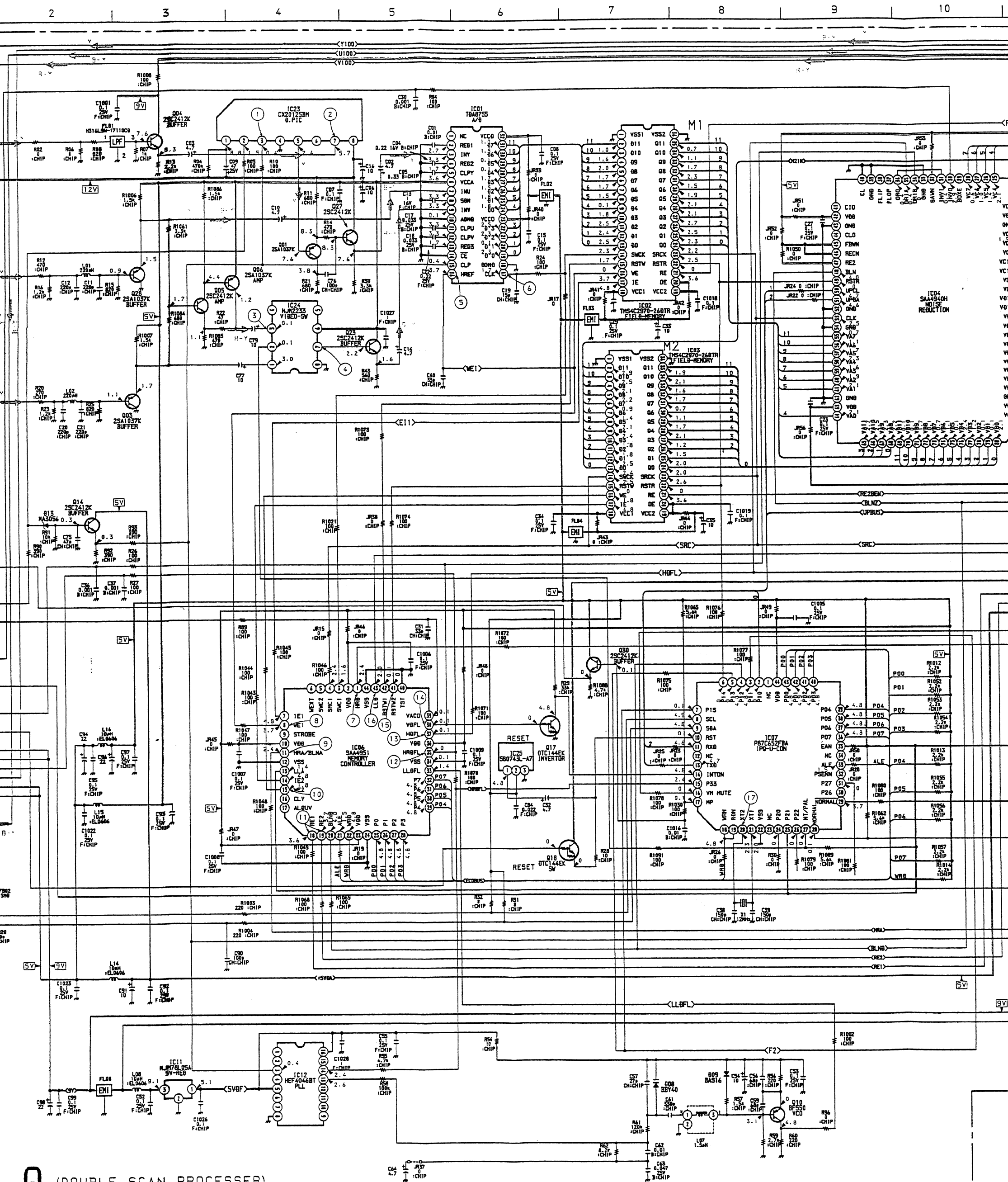
• Q BOARD WAVEFORMS



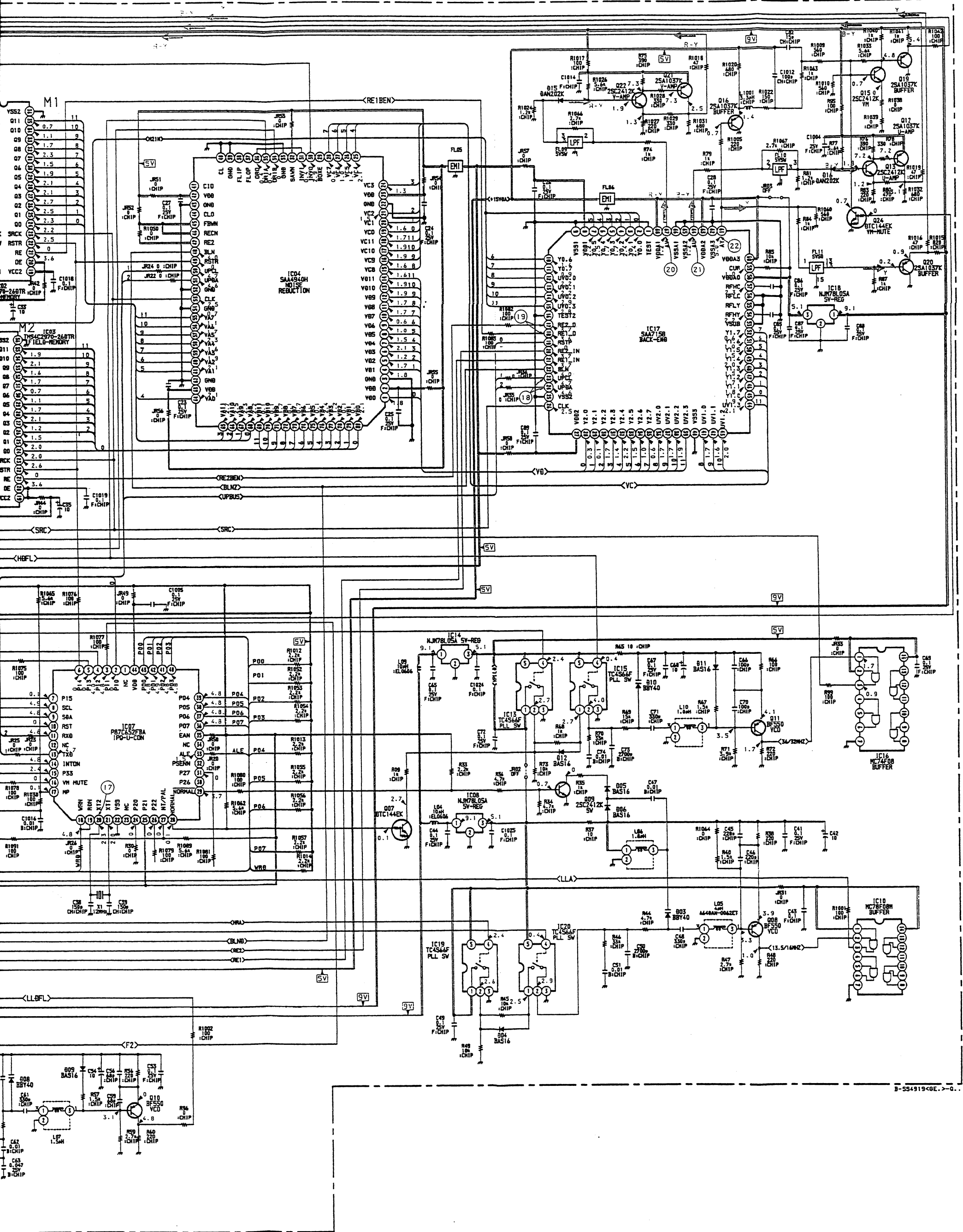
Q (DOUBLE SCAN PROCESSOR)



(DOUBLE SCAN PROCESSOR)



Q (DOUBLE SCAN PROCESSOR)



B-554919-0E.1-0.

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

[DOUBLE SCAN
PROCESSER]

[R. G. B OUT]

1 2 3 4

C

SCREEN MIN. MAX
227V-856V

(RGB OUT)

FV

TO 8 BOARD
T503

FOCUS

J701

H. STAT

200V

1 2 3 4 5 6

1 1000V
2 200V
3 GND
4 NC
5 H1
6 H2

CN701
6P
WHT
:MINI
TO 8 BOARD
CNS15

1 GND

CN703
3P
WHT
:S-MICRO

1 R IN
2 G IN
3 B IN
4 GND
5 9V
6 GND
7 1K OUT
8 NC

TO A BOARD
CN123

B-SS4919<0E.>C..

① 132 Vp-p (H)	② 117 Vp-p (H)	③ 110 Vp-p (H)
④ 27 Vp-p (H)		

A high-contrast, black and white image of a complex printed circuit board (PCB) layout. The board is densely packed with intricate circuitry, including numerous traces, pads, and component footprints. The layout is symmetrical, with a central vertical axis. The image is framed by a thick black border.

IC	
IC01	C-5
IC02	C-5
IC03	B-3
IC04	C-4
IC06	A-3
IC07	A-4
IC08	B-1, H-1
IC11	B-6, I-6
IC12	I-5
IC13	I-2
IC14	A-1, I-1
IC15	I-2
IC16	A-2
IC17	C-2
IC18	C-3, H-3
IC19	I-2
IC20	I-2
IC23	D-5, G-5
IC24	D-6
IC25	B-4

Q01	G - 5
Q03	G - 6
Q04	F - 6
Q05	G - 6
Q06	G - 6
Q07	I - 3
Q08	I - 2
Q09	I - 2

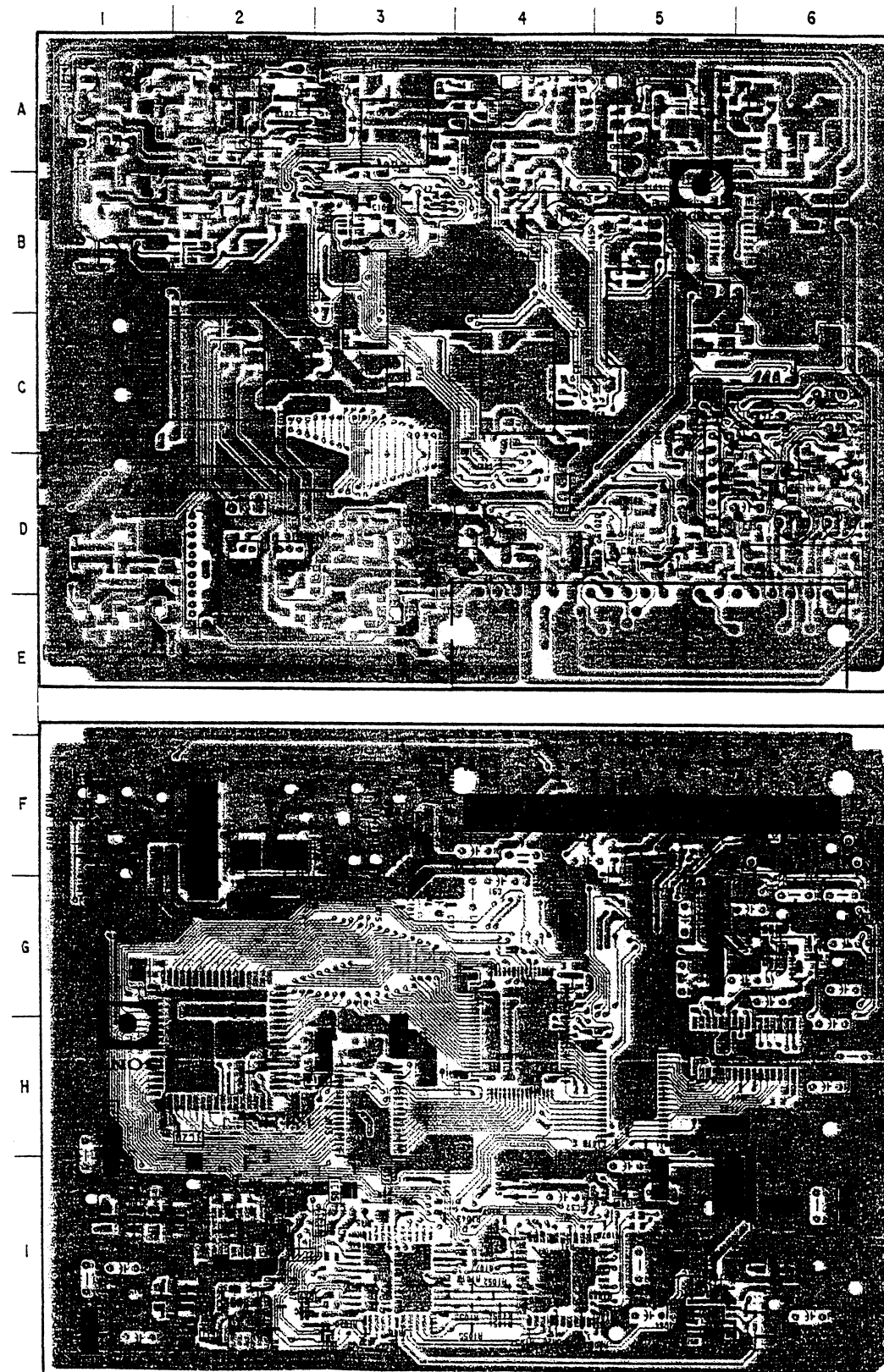
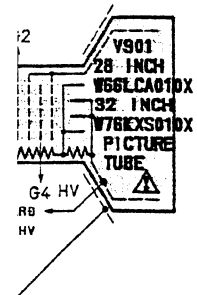
Note :

-  Pattern from the
-  Pattern of the re

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

5

- Q BOARD -



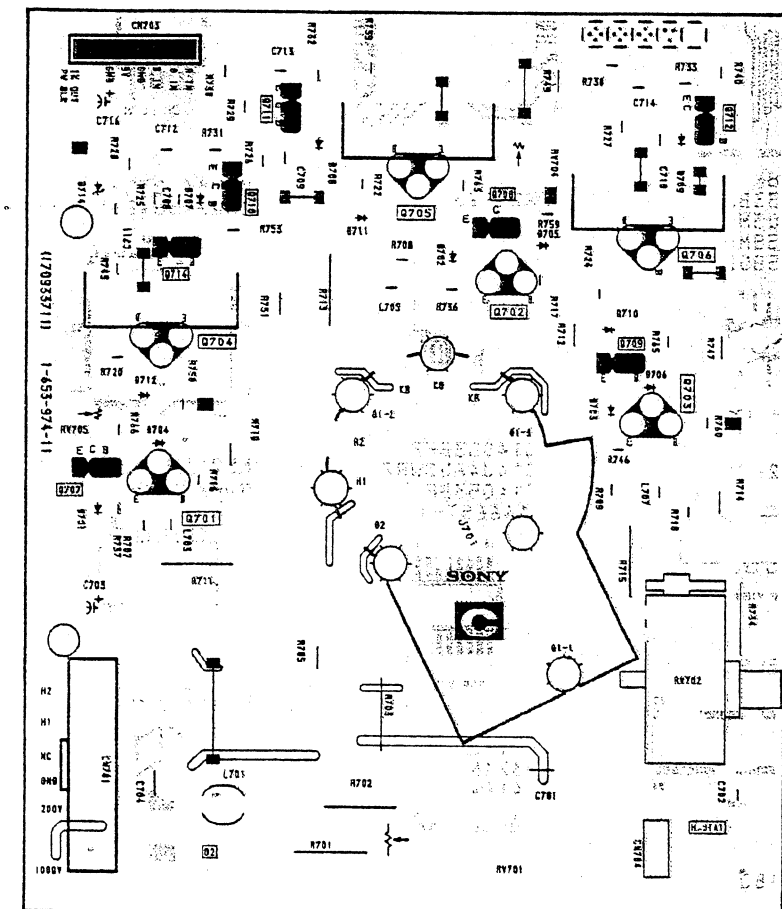
IC			
IC01	C-5	Q10	I-6
IC02	C-5	Q11	I-2
IC03	B-3	Q12	F-3
IC04	C-4	Q13	F-3
IC06	A-3	Q14	F-5
IC07	A-4	Q15	F-1
IC08	B-1, H-1	Q16	G-1
IC11	B-6, I-6	Q17	I-3
IC12	I-5	Q18	G-5
IC13	I-2	Q19	F-1
IC14	A-1, I-1	Q20	F-3
IC15	I-2	Q21	F-3
IC16	A-2	Q22	F-3
IC17	C-2	Q23	D-6
IC18	C-3, H-3	Q24	F-1
IC19	I-2	Q27	G-6
IC20	I-2	Q28	G-6
IC23	D-5, G-5	Q30	I-5
IC24	D-6	DIODE	
IC25	B-4		
TRANSISTOR		D03	I-1
		D04	I-2
Q01	G-5	D05	I-2
Q03	G-6	D06	I-1
Q04	F-6	D08	I-6
Q05	G-6	D09	I-5
Q06	G-6	D10	I-2
Q07	I-3	D11	I-1
Q08	I-2	D12	I-2
Q09	I-2	D13	F-5
		D15	F-2
		D16	F-2

Note :

-  : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

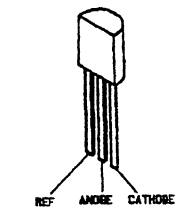
Schematic diagram

← **C** board

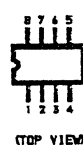


5-4. SEMICONDUCTORS

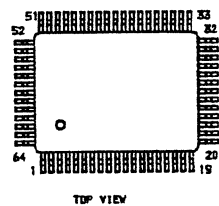
AN1431T



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NJM2233BM
NJM2903M
NJM4558M-T2
MPC4558G2



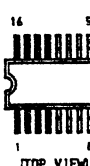
CXP8534A-SV4918



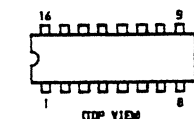
CX20125



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MC14046B0WRZ
MC14053BF
T0A4665T-T



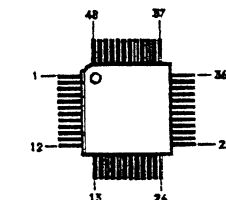
CXA1526P



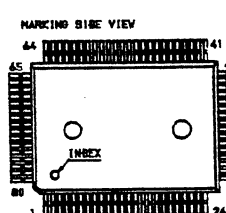
CXA1855S



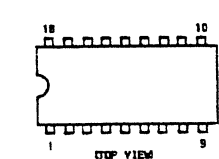
CXD2018Q



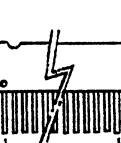
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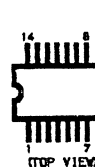
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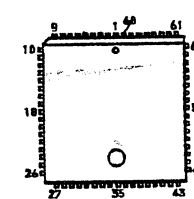
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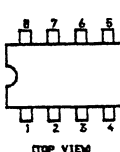
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MSP3410TE-L
SAA7158WP-L



M5216P
NJM2903B



NJM78L05A



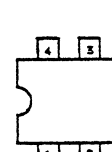
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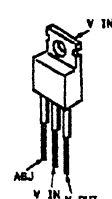
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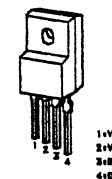
PC123F2



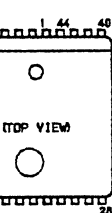
PQ05RH1



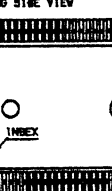
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PQ12RF21



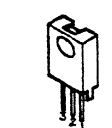
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/AB517
SAA4951/WP/VI-T
TPU3040TE-L



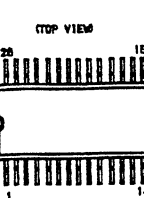
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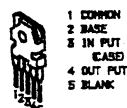
SBX-1790-11



S0A9187-2XGEG
S0A9188-3XGEG
M0645605-640-E2



STR83159



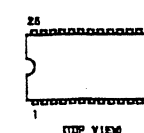
STV9379



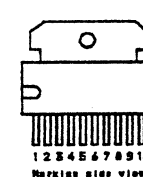
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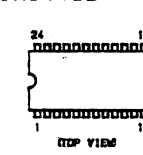
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TC4S66F (TE85R)



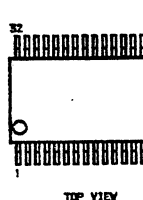
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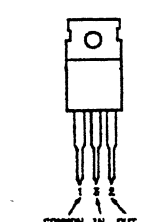
T0A8443B



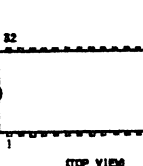
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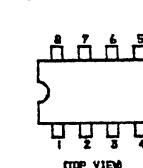
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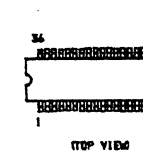
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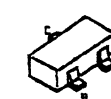
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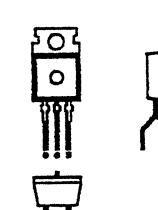
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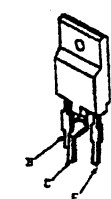
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2SA1162G
2SC2412K
2SC2712-YG



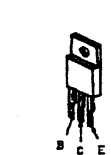
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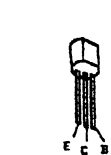
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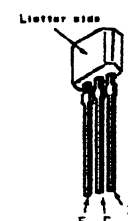
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2SA1091
2SD2551



2SA1175-HFE
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2SC3311A

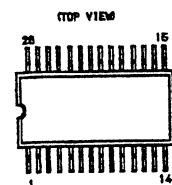


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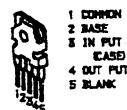
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

SDA9187-2XGEG
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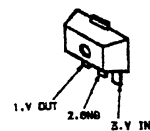
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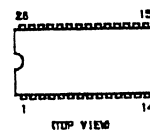
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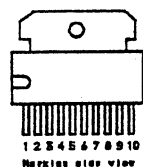
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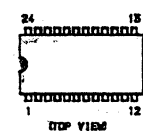
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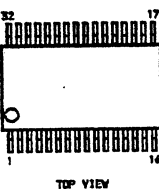
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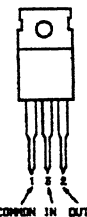
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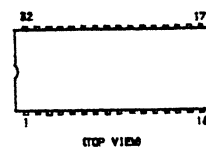
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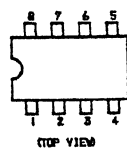
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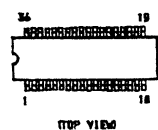
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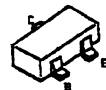
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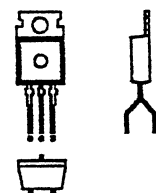
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BF550
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DTA114TK
DTA114EK
DTA124EK
DTA144EK
2SA1037K
2SA1162G
2SC2412K
2SC2712-YG



IRF1BC30G-LF



IRF1744G-LF



IRF614
2SA1837
2SB2012



2SA1091
2SD2551



2SA1175-HFE
2SA1309A
2SC2785-HFE
2SC3311A



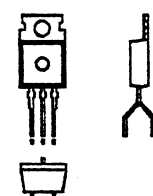
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2SB774-34



2SC2611
2SC2688-LK
2SC3840K



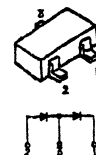
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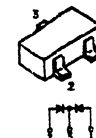
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2SK940 (TPE6)



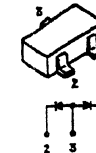
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BBY40
DA204K
1SS226



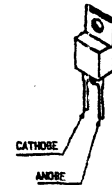
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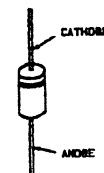
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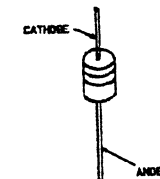
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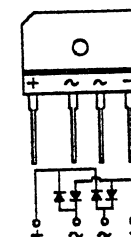
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EL1Z
GP08DPKG23
GP08B
RGP10GPKG23
RGP15GPKG23



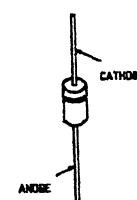
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MTZJ-T-77-15
R010ESB3
R03.9ESB2
R033ESB1
R033F-B1
R05.1ESB1
R07.5ESB2
R09.1ESB
R09.1ESL
1SS119



BD4SB60L
RBA402L
RBA406B



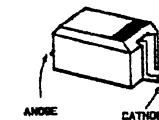
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ERB24-06BTP1
RGP02-20EL-6394
S2LA20F



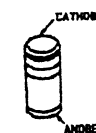
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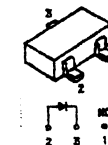
MA110



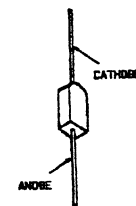
MA3051L-TX



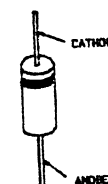
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MA3056
MA3068M
MA3075T
MA3180M-TX
MA3360-M
R015M-B2
R02.0MB
R036M-B
R05.1M-B2
R05.6M-B2
R06.8M-B2



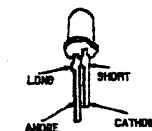
RM11C



Ru-3AM



TF5415 (D102)
SEL1222R-C



SECTION 6 EXPLODED VIEWS

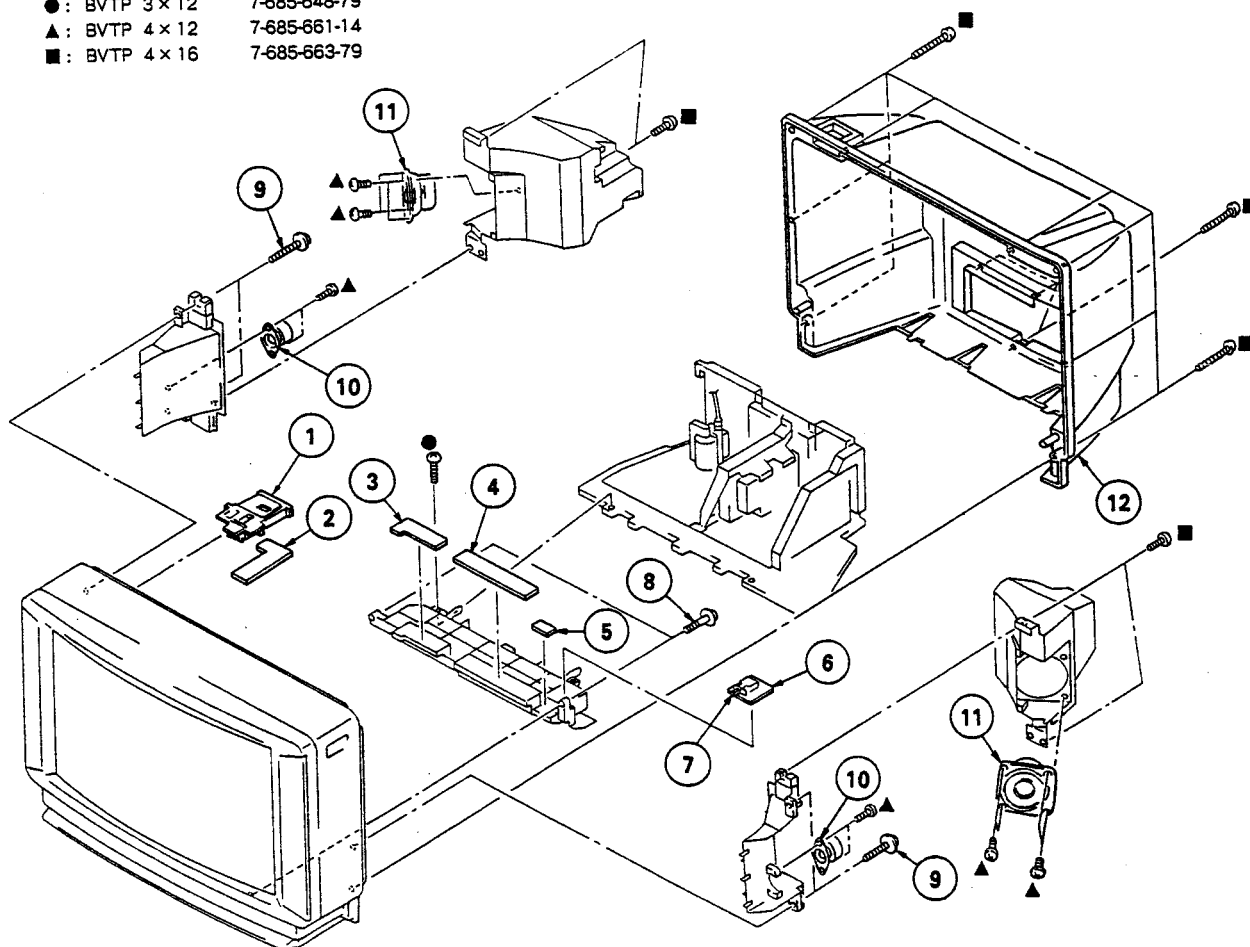
NOTE:

- Items with on part number and on description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

6-1. REAR COVER AND SPEAKER (KV-W28MH11 / W28MN11)

- : BVTP 3 × 12 7-685-648-79
▲: BVTP 4 × 12 7-685-661-14
■: BVTP 4 × 16 7-685-663-79



REF. NO. PART NO. DESCRIPTION

1	X-4032-292-1	BRACKET ASSY, H5
2	*A-1372-075-A	H4 BOARD, COMPLETE (KV-W28MN11/MH11)
3	*A-1372-068-A	H1 BOARD, COMPLETE (KV-W28MN11/MH11)
4	*A-1372-069-A	H2 BOARD, COMPLETE (KV-W28MN11/MH11)
5	*A-1372-067-A	H3 BOARD, COMPLETE (KV-W28MN11/MH11)

REMARK

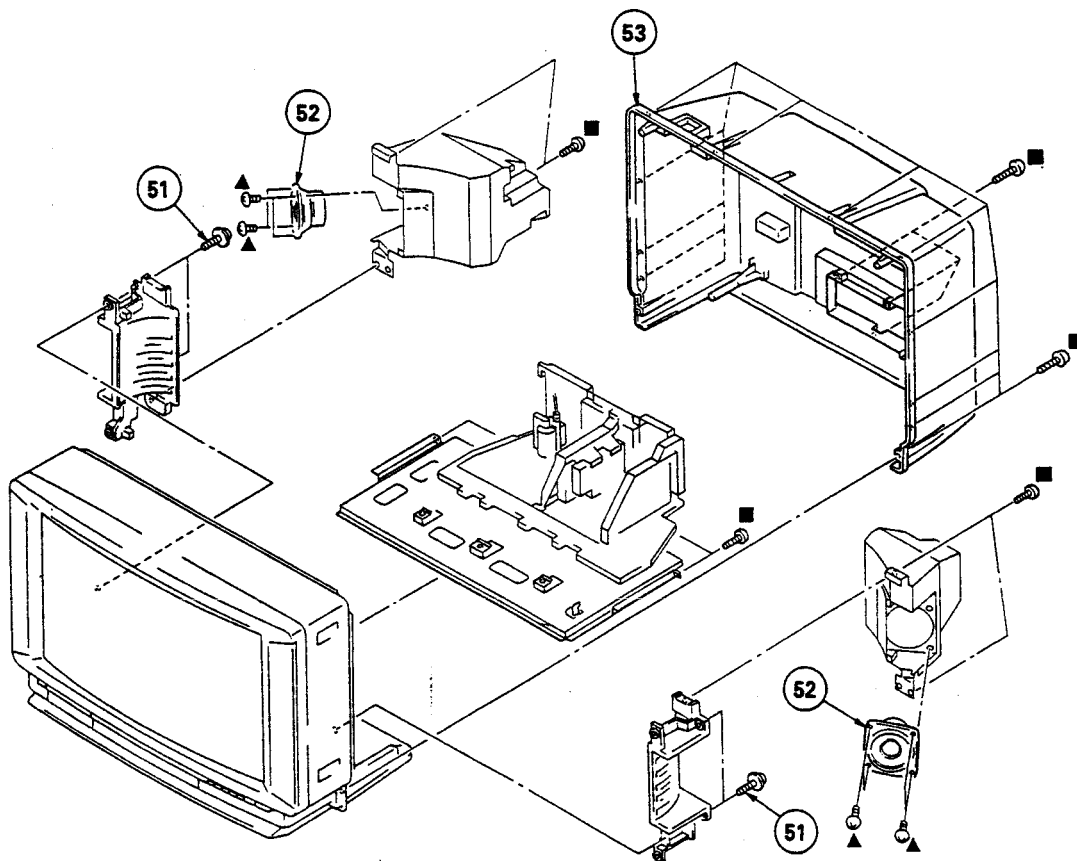
REF. NO. PART NO. DESCRIPTION

6	*A-1241-173-A	F2 BOARD, COMPLETE
7	~~A-1-571-433-11~~	~~SWITCH, PUSH, AC POWER~~
8	4-319-520-11	SCREW, SPECIAL (+PW4X30)
9	4-384-096-01	SCREW (4X16), TAPPING, +P
10	1-504-121-51	SPEAKER (5CM)
11	1-504-771-11	SPEAKER (12CM)
12	4-042-194-21	COVER, REAR

REMARK

6-2. REAR COVER AND SPEAKER (KV-W32MH11 / W32MN11)

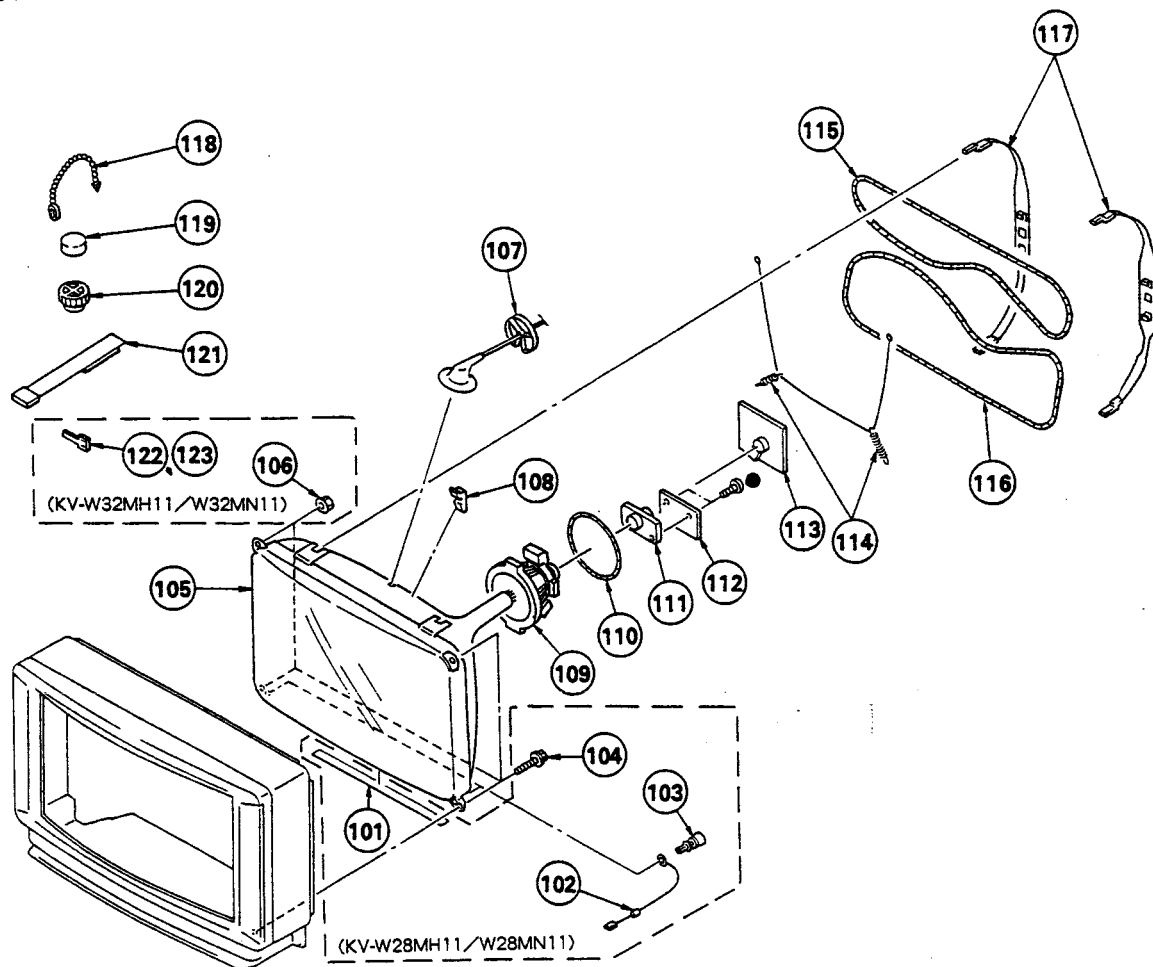
▲ : BVTP 4 × 12 7-685-661-14
■ : BVTP 4 × 16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-384-096-01	SCREW (4X16), TAPPING, +P	
52	1-504-771-11	SPEAKER (12CM)	
53	4-045-067-01	COVER, REAR	

6-3. PICTURE TUBE

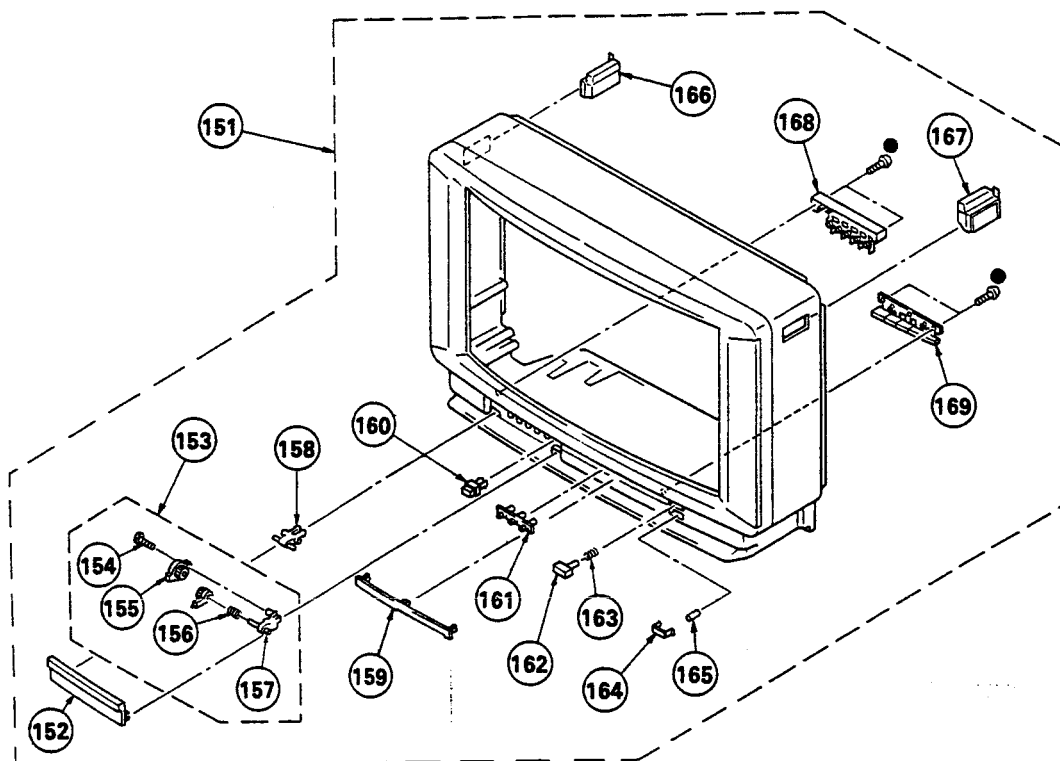
●: BVTP 3 × 12 7-685-648-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	4-391-833-01	CLOTH, PROTECTION (KV-W28MN11/MH11)		114	4-369-318-00	SPRING, TENSION	
102	1-900-071-31	CONNECTOR ASSY (KV-W28MN11/MH11)		115	Δ 1-409-951-11	COIL, DEMAGNETIZATION (KV-W28MN11/MH11)	
103	4-386-618-01	RIVET, T TYPE (KV-W28MN11/MH11)		Δ 1-409-953-11	COIL, DEMAGNETIZATION (KV-W32MN11/MH11)		
104	4-390-505-01	SCREW (7), TAPPING (KV-W28MN11/MH11)		Δ 1-409-952-11	COIL, DEMAGNETIZATION (KV-W28MN11/MH11)		
105	Δ 8-737-756-05	PICTURE TUBE 28C11 (W66EAC010X) (KV-W28MN11/MH11)		Δ 1-409-954-11	COIL, DEMAGNETIZATION (KV-W32MN11/MH11)		
105	Δ 8-735-023-05	PICTURE TUBE 32C11 (W76KX5010X) (KV-W32MN11/MH11)		117	*4-045-294-01	HOLDER, DGC (KV-W32MN11/MH11)	
106	4-387-204-01	NUT, SPECIAL, CRT (KV-W32MN11/MH11)		4-040-324-01	HOLDER, DGC (KV-W28MN11/MH11)		
107	*3-704-372-01	HOLDER, HV CABLE (KV-W32MN11/MH11)		118	4-308-870-00	CLIP, LEAD WIRE	
108	3-704-495-01	SPACER, DY (KV-W28MN11/MH11)		119	1-452-032-00	MAGNET, DISK; 10MM φ	
109	Δ 8-451-449-11	DY-Y28CFC2 (MFLY) (KV-W28MN11/MH11)		120	1-452-094-00	MAGNET, ROTABLE DISK; 15MM φ	
Δ 8-451-460-11	DY-Y32CFC2M (KV-W32MN11/MH11)			121	X-4030-584-1	PERMALLOY ASSY, CORRECTION (KV-W28MN11/MH11)	
110	1-452-724-11	COIL, NA ROTATION (RT-165)		121	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE (KV-W32MN11/MH11)	
111	Δ 1-452-616-11	NECK ASSY, PICTURE TUBE (NA323)		122	4-034-272-01	PLATE, CORRECTION, TLV (KV-W32MN11/MH11)	
112	*A-1342-258-A	VM BOARD, COMPLETE (KV-W28MN11/MH11)		123	4-034-272-11	PLATE, CORRECTION, TLV (KV-W32MN11/MH11)	
113	*A-1331-391-A	C BOARD, COMPLETE (KV-W28MN11/MH11)					
	*A-1331-389-A	C BOARD, COMPLETE (KV-W32MN11/MH11)					

6-4. CABINET (WITH BEZEL)
(KV-W28MH11 / W28MN11)

●: BVTP 3 × 12 7-685-648-79

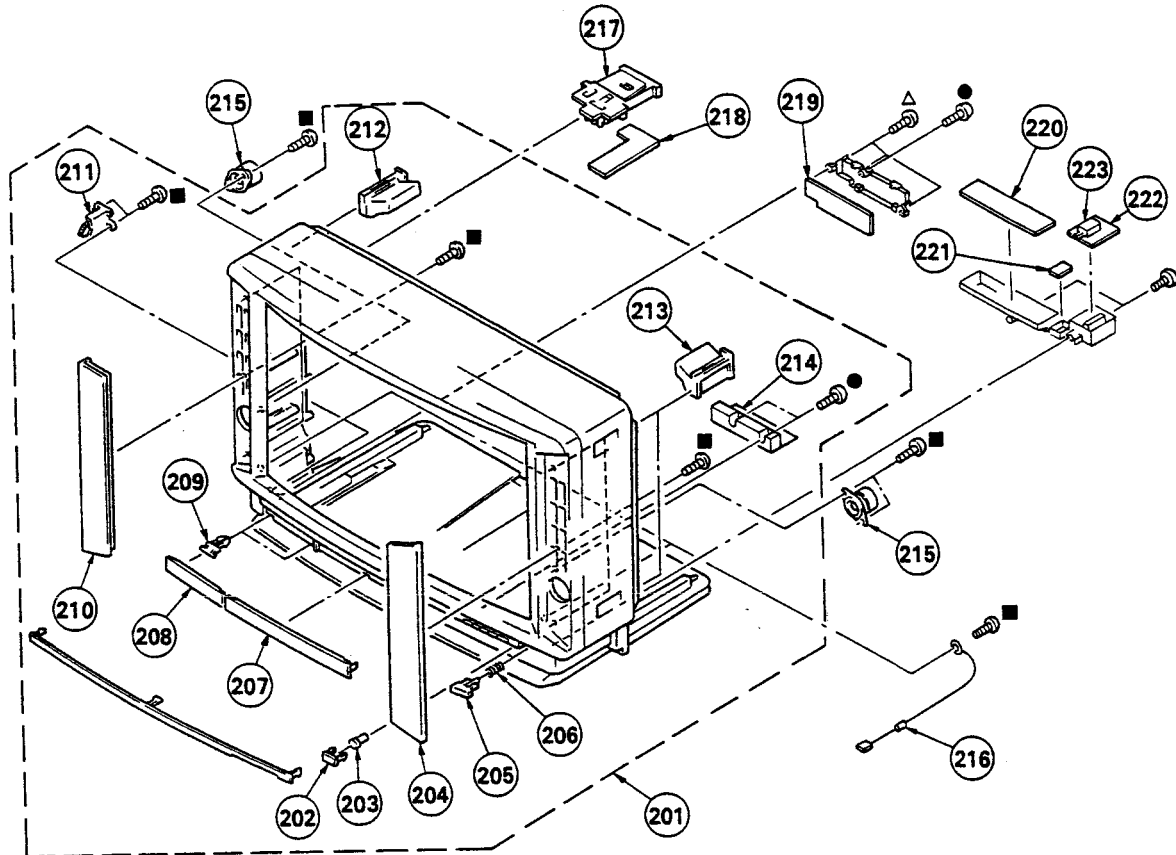


REF.NO.	PART NO.	DESCRIPTION
151	X-4032-291-1	BEZNET ASSY
152	4-042-193-41	DOOR
153	X-4031-244-1	DAMPER ASSY
154	4-033-184-01	SCREW, SPECIAL
155	4-036-880-11	DAMPER
156	4-041-016-01	SPRING
157	4-041-017-01	SHAFT (MAIN), DAMPER DOOR
158	3-703-035-12	SHAFT, LID
159	4-042-478-11	PANEL, CONTROL
160	4-042-192-01	CATCHER, PUSH

REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
152-169	161	4-042-189-11	GUIDE, LIGHT	
	162	4-042-187-21	BUTTON, POWER	
154-157	163	4-042-593-01	SPRING, COMPRESSION	
	164	4-042-190-01	WINDOW, ORNAMENTAL	
	165	*4-389-517-01	GUIDE (R), LIGHT	
	166	4-037-968-03	HOLDER (L)	
	167	4-037-969-03	HOLDER (R)	
	168	4-042-186-01	BUTTON, SUB MENU	
	169	4-042-185-01	BUTTON, MAIN MENU	

6-5. CABINET (WITH BEZEL)
(KV-W32MH11 / W32MN11)

- : BVTP 3 × 12 7-685-648-79
■: BVTP 4 × 16 7-685-663-79
△: BV 3 × 25 7-685-152-19



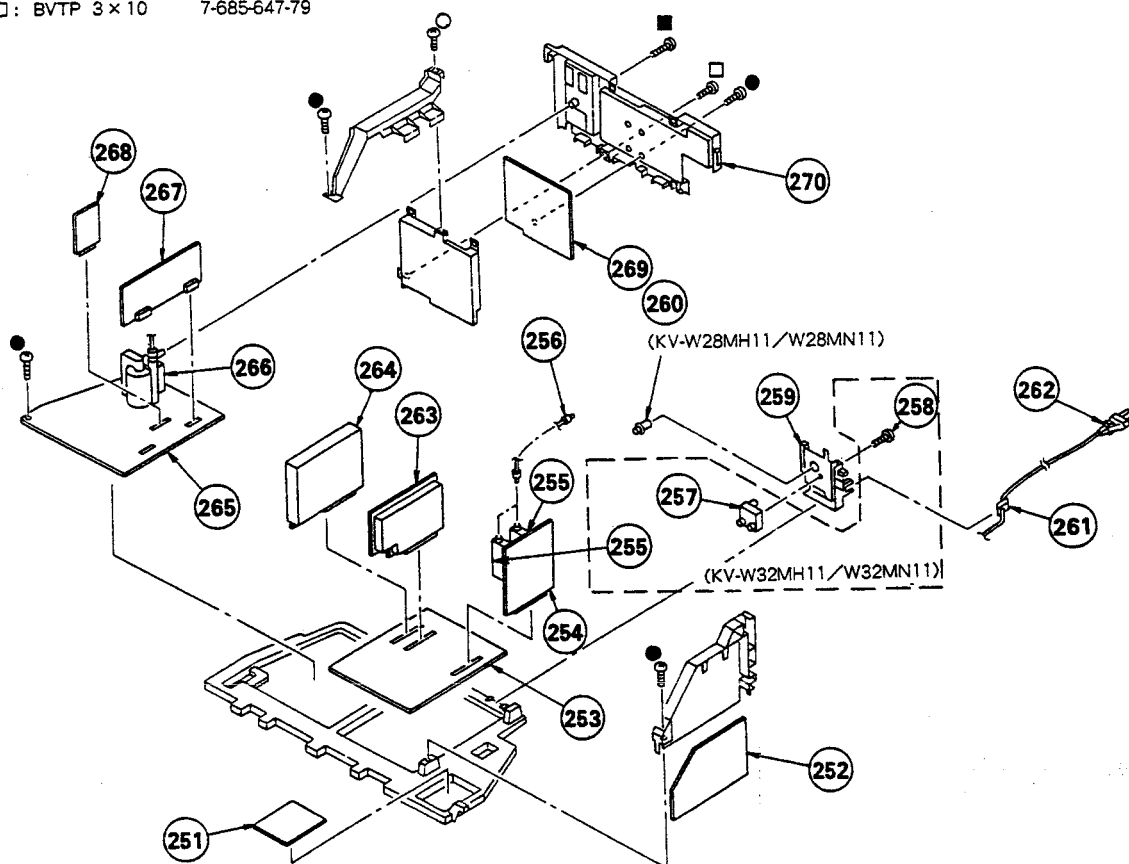
The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
201	X-4032-297-1	BEZNET ASSY	202-214	211	4-036-990-01	DAMPER	(KV-W32MN11/MH11)
202	4-036-981-01	FILTER, RAY CATCHER		212	4-037-025-11	HOLDER (L)	
203	4-042-927-01	GUIDE, LIGHT		213	4-037-030-11	HOLDER (R)	
204	X-4032-296-1	GRILLE (R) ASSY, SPEAKER		214	4-047-157-01	SUPPORTER	
205	4-036-976-31	BOTTOM, POWER		215	1-504-121-51	SPEAKER (5CM)	
206	4-042-593-01	SPRING, COMPRESSION		216	1-900-138-08	CONNECTOR ASSY	
207	4-036-998-21	GRILLE, CENTER SP		217	X-4032-292-1	BRACKET ASSY, H5	
208	X-4032-294-1	DOOR ASSY		218	*A-1372-073-A	H4 BOARD, COMPLETE	(KV-W32MN11/MH11)
209	3-703-035-12	SHAFT, LID		219	*A-1372-070-A	H1 BOARD, COMPLETE	(KV-W32MN11/MH11)
210	X-4032-295-1	GRILLE (L) ASSY, SPEAKER		220	*A-1372-071-A	H2 BOARD, COMPLETE	(KV-W32MN11/MH11)
				221	*A-1372-072-A	H3 BOARD, COMPLETE	(KV-W32MN11/MH11)
				222	*A-1241-173-A	F2 BOARD, COMPLETE	
				223	△ 1-571-433-11	SWITCH, PUSH (AC POWER)	

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
 RM-850

6-6. CHASSIS

- : BVTP 3×12 7-685-648-79
- : BVTP 4×16 7-685-663-79
- : P 3×8 7-682-548-04
- : BVTP 3×10 7-685-647-79



The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
251	*A-1380-480-A	K BOARD, COMPLETE (KV-W28MN11/MH11)		262	Δ 1-574-062-52	CORD, POWER (6.0A/250V) (KV-W28MH11/W32MH11)	
	*A-1380-478-A	K BOARD, COMPLETE (KV-W32MN11/MH11)		262	Δ 1-696-401-11	CORD, POWER (6.0A/250V) (KV-W28MN11/W32MN11)	
252	*A-1241-174-A	F1 BOARD, COMPLETE		263	*A-1135-807-A	B BOARD, COMPLETE	
253	*A-1297-418-A	A BOARD, COMPLETE		264	*A-1275-126-A	Q BOARD, COMPLETE	
254	*A-1297-417-A	A2 BOARD, COMPLETE (KV-W28MN11/MH11)		265	*A-1346-262-A	D BOARD, COMPLETE (KV-W28MN11/MH11)	
	*A-1297-419-A	A2 BOARD, COMPLETE (KV-W32MN11/MH11)		265	*A-1346-266-A	D BOARD, COMPLETE (KV-W32MN11/MH11)	
255	Δ 8-598-270-00	TUNER, ET BTP-RG421		266	X-4032-476-1	TRANSFORMER ASSY, FLYBACK (NX-3041/J1B)	
256	*1-558-539-21	CABLE, P-P (KV-W28MN11/MH11)					
	*1-555-110-00	CABLE, P-P (KV-W32MN11/MH11)		267	*A-1341-842-A	D1 BOARD, COMPLETE (KV-W28MN11/MH11)	
257	1-251-249-11	DISTRIBUTOR, RF (KV-W32MN11/MH11)			*A-1341-850-A	D1 BOARD, COMPLETE (KV-W32MN11/MH11)	
258	4-379-611-01	SCREW (M3X8), +B (KV-W32MN11/MH11)		268	*A-1346-265-A	D2 BOARD, COMPLETE	
259	4-046-739-11	BRACKET, SPLITTER (KV-W28MN11/MH11)		269	*A-1388-176-A	J BOARD, COMPLETE	
	4-046-739-11	BRACKET, SPLITTER (KV-W32MN11/MH11)		270	4-046-735-01	BRACKET, J PC BOARD	
260	1-563-204-11	SOCKET, ANTENNA (PAL/SECAM) (KV-W28MN11/MH11)					
261	4-389-778-01	HOLDER, AC CORD					

SECTION 7
ELECTRICAL PARTS LIST

B

NOTE:

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

- MF: μ F, PF: μ PF

COILS

- MMH: mH, UH: μ H

• The components identified by $\boxtimes$ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1135-807-A	B BOARD, COMPLETE					

	3-741-396-01	INSULATOR					
		<CAPACITOR>					
C1301	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C1347	1-126-933-11	ELECT 100MF	20% 16V
C1302	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C1348	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1303	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C1349	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1304	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1350	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1305	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1351	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C1306	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1352	1-124-126-00	ELECT 47MF	20% 16V
C1307	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1353	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1308	1-164-505-11	CERAMIC CHIP 2.2MF	16V	C1354	1-163-237-11	CERAMIC CHIP 27PF	5% 50V
C1309	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C1355	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C1310	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C1356	1-124-126-00	ELECT 47MF	20% 16V
C1311	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C1359	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C1312	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C1360	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1313	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C1361	1-164-346-11	CERAMIC CHIP 1MF	16V
C1314	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C1362	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C1316	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1363	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C1317	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C1364	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1318	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C1401	1-126-375-11	ELECT 100MF	20% 16V
C1319	1-104-664-11	ELECT 47MF	20% 25V	C1402	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1320	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1403	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1321	1-163-239-11	CERAMIC CHIP 33PF	5% 50V	C1404	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1322	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C1405	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1323	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1407	1-124-126-00	ELECT 47MF	20% 16V
C1324	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V	C1408	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1325	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1409	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C1326	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C1410	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C1327	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C1411	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C1328	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C1412	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C1329	1-126-933-11	ELECT 100MF	20% 16V	C1413	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C1330	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1414	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C1331	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C1415	1-163-239-11	CERAMIC CHIP 33PF	5% 50V
C1332	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1417	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1333	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1418	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1334	1-126-375-11	ELECT 100MF	20% 16V	C1419	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1335	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1420	1-163-245-11	CERAMIC CHIP 56PF	5% 50V
C1336	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1421	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1337	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1422	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1338	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C1423	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1339	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C1424	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1340	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1425	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1341	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1426	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1342	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C1431	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1343	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1432	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C1344	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1433	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C1345	1-126-966-11	ELECT 33MF	20% 16V	C1434	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1346	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1435	1-126-375-11	ELECT 100MF	20% 16V
				C1436	1-126-375-11	ELECT 100MF	20% 16V
				C1437	1-163-038-91	CERAMIC CHIP 0.1MF	25V
				C1438	1-126-375-11	ELECT 100MF	20% 16V
				C1439	1-126-933-11	ELECT 100MF	20% 16V
				C1440	1-163-038-91	CERAMIC CHIP 0.1MF	25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1316	8-729-216-22	TRANSISTOR 2SA1162-G		R1327	1-216-083-00	METAL GLAZE 27K 5%	1/10W
Q1317	8-729-216-22	TRANSISTOR 2SA1162-G		R1328	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q1318	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1330	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
Q1319	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1332	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
Q1320	8-729-216-22	TRANSISTOR 2SA1162-G		R1333	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q1323	8-729-901-01	TRANSISTOR DTC144EK		R1334	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q1324	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1335	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
Q1325	8-729-216-22	TRANSISTOR 2SA1162-G		R1336	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q1326	8-729-119-78	TRANSISTOR 2SC2785-HFE		R1337	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
Q1401	8-729-900-53	TRANSISTOR DTC114EK		R1338	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q1402	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1339	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
Q1403	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1340	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q1404	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1341	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q1405	8-729-216-22	TRANSISTOR 2SA1162-G		R1342	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q1407	8-729-216-22	TRANSISTOR 2SA1162-G		R1343	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
Q1408	8-729-216-22	TRANSISTOR 2SA1162-G		R1344	1-216-295-00	CONDUCTOR, CHIP	
Q1409	8-729-216-22	TRANSISTOR 2SA1162-G		R1345	1-216-295-00	CONDUCTOR, CHIP	
Q1410	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1347	1-216-295-00	CONDUCTOR, CHIP	
Q1411	8-729-901-01	TRANSISTOR DTC144EK		R1349	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
Q1412	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1350	1-216-663-11	METAL CHIP 3.3K 0.50%	1/10W
Q1413	8-729-900-53	TRANSISTOR DTC114EK		R1351	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
Q1414	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1352	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q1415	8-729-216-22	TRANSISTOR 2SA1162-G		R1353	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
Q1416	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1354	1-216-035-00	METAL GLAZE 270 5%	1/10W
Q1417	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1357	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q1418	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1358	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
Q1421	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1359	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q1422	8-729-216-22	TRANSISTOR 2SA1162-G		R1360	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
Q1423	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1361	1-216-637-11	METAL CHIP 270 0.50%	1/10W
Q1424	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1362	1-216-635-11	METAL CHIP 220 0.50%	1/10W
Q1425	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1363	1-216-295-00	CONDUCTOR, CHIP	
Q1501	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1364	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q1502	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1365	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
Q1505	8-729-901-04	TRANSISTOR DTA114EK		R1366	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q1506	8-729-900-53	TRANSISTOR DTC114EK		R1367	1-216-039-00	METAL GLAZE 390 5%	1/10W
Q1507	8-729-920-74	TRANSISTOR 2SC2412K-QR		R1368	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q1508	8-729-900-53	TRANSISTOR DTC114EK		R1369	1-216-049-00	METAL GLAZE 1K 5%	1/10W
<RESISTOR>				R1370	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R1301	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1371	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1302	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1372	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1303	1-216-039-00	METAL GLAZE 390 5%	1/10W	R1373	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1304	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R1374	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1305	1-216-025-00	METAL GLAZE 100 5%	1/10W	R1375	1-216-666-11	METAL CHIP 4.3K 0.50%	1/10W
R1306	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1376	1-208-784-11	METAL CHIP 1.2K 0.50%	1/10W
R1307	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1377	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1308	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R1378	1-216-295-00	CONDUCTOR, CHIP	
R1309	1-216-025-00	METAL GLAZE 100 5%	1/10W	R1380	1-216-035-00	METAL GLAZE 270 5%	1/10W
R1310	1-216-025-00	METAL GLAZE 100 5%	1/10W	R1381	1-216-027-00	METAL GLAZE 120 5%	1/10W
R1311	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1384	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1312	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1385	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1313	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R1386	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R1315	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R1387	1-216-115-00	METAL GLAZE 560K 5%	1/10W
R1316	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1388	1-216-039-00	METAL GLAZE 390 5%	1/10W
R1317	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1389	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1318	1-216-041-00	METAL GLAZE 470 5%	1/10W	R1390	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1320	1-216-035-00	METAL GLAZE 270 5%	1/10W	R1391	1-249-417-11	CARBON 1K 5%	1/4W
R1321	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1401	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1322	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R1402	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1323	1-216-033-00	METAL GLAZE 220 5%	1/10W	R1403	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R1324	1-216-033-00	METAL GLAZE 220 5%	1/10W	R1404	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1325	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R1405	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1326	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R1406	1-216-025-00	METAL GLAZE 100 5%	1/10W
				R1407	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W

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The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

F1 Q

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
*A-1241-174-A F1 BOARD, COMPLETE *****				<RESISTOR>			
4-382-854-11 SCREW (M3X10), P, SW (+)				R1603	1-247-289-00	CARBON 8.2M 5% 1W	
<CAPACITOR>				R1604	1-219-363-11	FUSIBLE 5.6 5% 5W	F
C1601A	1-104-706-51	FILM 0.22MF 20% 250V		R1605	1-249-416-11	CARBON 820 5% 1/4W	F
C1602	1-136-601-11	FILM 0.01MF 10% 630V		R1606	1-249-416-11	CARBON 820 5% 1/4W	F
C1603	1-136-601-11	FILM 0.01MF 10% 630V		R1607	1-260-300-11	CARBON 4.7 5% 1/2W	
C1609A	1-104-706-51	FILM 0.22MF 20% 250V		R1608	1-214-925-00	CARBON 330K 5% 1/2W	
C1611	1-161-742-00	CERAMIC 0.0022MF 20% 400V		R1609	1-214-925-00	CARBON 330K 5% 1/2W	
C1612A	1-161-830-91	CERAMIC 0.0047MF 500V		R1610	1-216-425-11	METAL OXIDE 56 5% 1W	F
C1613A	1-161-830-91	CERAMIC 0.0047MF 500V		R1611	1-249-429-11	CARBON 10K 5% 1/4W	
C1614	1-161-830-00	CERAMIC 0.0047MF 500V		R1612	1-249-429-11	CARBON 10K 5% 1/4W	
C1615	1-161-830-00	CERAMIC 0.0047MF 500V		R1613	1-249-417-11	CARBON 1K 5% 1/4W	F
C1616	1-136-207-11	FILM 0.047MF 10% 400V		R1614	1-215-928-11	METAL OXIDE 68K 5% 3W	F
C1617	1-136-187-11	MYLAR 0.047MF 5% 250V		<RELAY>			
C1618	1-136-165-00	FILM 0.1MF 5% 50V		RY1601A	1-755-018-11	RELAY	
C1619	1-107-667-11	ELECT 2.2MF 20% 400V		<TRANSFORMER>			
C1620	1-124-122-11	ELECT 100MF 20% 50V		T1602A	1-421-944-11	TRANSFORMER, LINE FILTER	
C1621	1-136-165-00	FILM 0.1MF 5% 50V		<THERMISTOR>			
C1622	1-162-318-11	CERAMIC 0.001MF 10% 500V		TH1601A	1-809-827-21	THERMISTOR, POSITIVE	
C1624	1-104-350-11	ELECT 1000MF 20% 250V		*****			
C1625	1-104-350-11	ELECT 1000MF 20% 250V		*A-1275-126-A Q BOARD, COMPLETE *****			
C1626	1-124-903-11	ELECT 1MF 20% 50V		<CAPACITOR>			
<CONNECTOR>				C01	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
CN1601	1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		C02	1-124-927-11	ELECT 4.7MF 20% 50V	
CN1602	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		C03	1-124-927-11	ELECT 4.7MF 20% 50V	
CN1603	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		C04	1-164-489-11	CERAMIC CHIP 0.22MF 10% 16V	
CN1604	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		C05	1-162-568-11	CERAMIC CHIP 0.33MF 10% 16V	
CN1605	1-695-915-11	TAB (CONTACT)		C06	1-126-964-11	ELECT 10MF 20% 50V	
CN1608	1-766-964-11	PIN, CONNECTOR (PC BOARD) 6P		C07	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
CN1609	1-564-507-11	PLUG, CONNECTOR 4P		C08	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
<DIODE>				C09	1-104-664-11	ELECT 47MF 20% 25V	
D1601A	8-719-510-53	DIODE D4SB60L		C10	1-124-927-11	ELECT 4.7MF 20% 50V	
D1602	8-719-049-49	DIODE TF541S		C11	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
D1603	8-719-110-18	DIODE RD10ESB3		C12	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
D1604	8-719-304-63	DIODE RM11C		C13	1-164-346-11	CERAMIC CHIP 1MF 16V	
D1605	8-719-979-58	DIODE EGP10D		C14	1-124-927-11	ELECT 4.7MF 20% 50V	
D1606	8-719-911-19	DIODE 1SS119		C15	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
D1607	8-719-304-63	DIODE RM11C		C16	1-126-964-11	ELECT 10MF 20% 50V	
<FERRITE BEAD>				C17	1-163-989-11	CERAMIC CHIP 0.033MF 10% 25V	
FB1601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		C18	1-163-989-11	CERAMIC CHIP 0.033MF 10% 25V	
<IC>				C19	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
IC1601A	8-749-923-94	IC STR81159A		C20	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
<COIL>				C21	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
L1601	1-412-525-21	INDUCTOR 10UH		C22	1-164-222-11	CERAMIC CHIP 0.22MF 25V	
<TRANSISTOR>				C23	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
Q1601	8-729-119-78	TRANSISTOR 2SC2785-HFE		C24	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
Q1602	8-729-119-78	TRANSISTOR 2SC2785-HFE		C25	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
				C26	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
				C27	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
				C28	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
				C29	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
				C30	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	

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REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
C31	1-163-239-11	CERAMIC CHIP 33PF	5%	50V	C1004	1-164-346-11	CERAMIC CHIP 1MF		16V
C32	1-124-927-11	ELECT 4.7MF	20%	50V	C1005	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C33	1-126-964-11	ELECT 10MF	20%	50V	C1006	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C34	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C1007	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C35	1-126-964-11	ELECT 10MF	20%	50V	C1008	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C36	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C1009	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C37	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C1012	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C38	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	C1014	1-164-346-11	CERAMIC CHIP 1MF		16V
C39	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	C1016	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C40	1-163-239-11	CERAMIC CHIP 33PF	5%	50V	C1017	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C41	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C1018	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C42	1-126-964-11	ELECT 10MF	20%	50V	C1019	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C43	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C1020	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C44	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C1022	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C45	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C1023	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C46	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C1024	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C47	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C1025	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C48	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	C1026	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C49	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C1027	1-164-346-11	CERAMIC CHIP 1MF		16V
C50	1-163-014-00	CERAMIC CHIP 0.0027MF	10%	50V	C1028	1-164-346-11	CERAMIC CHIP 1MF		16V
C51	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	<CONNECTOR>				
C52	1-163-038-91	CERAMIC CHIP 0.1MF		25V	CN40	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P		
C53	1-163-038-91	CERAMIC CHIP 0.1MF		25V	<DIODE>				
C54	1-126-964-11	ELECT 10MF	20%	50V	D03	8-719-047-36	DIODE BBY40		
C55	1-163-038-91	CERAMIC CHIP 0.1MF		25V	D04	8-719-047-37	DIODE BAS16		
C56	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	D05	8-719-047-37	DIODE BAS16		
C57	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	D06	8-719-047-37	DIODE BAS16		
C59	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	D08	8-719-047-36	DIODE BBY40		
C61	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	D09	8-719-047-37	DIODE BAS16		
C62	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	D10	8-719-047-36	DIODE BBY40		
C63	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D11	8-719-047-37	DIODE BAS16		
C64	1-124-927-11	ELECT 4.7MF	20%	50V	D12	8-719-047-37	DIODE BAS16		
C65	1-163-038-91	CERAMIC CHIP 0.1MF		25V	D13	8-719-105-91	DIODE RD5.6W-B2		
C66	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	D15	8-719-914-43	DIODE DAN202K		
C67	1-163-038-91	CERAMIC CHIP 0.1MF		25V	D16	8-719-914-43	DIODE DAN202K		
C68	1-126-964-11	ELECT 10MF	20%	50V	<FERRITE BEAD>				
C69	1-163-038-91	CERAMIC CHIP 0.1MF		25V	FB01	1-414-232-11	INDUCTOR, FERRITE BEAD		
C70	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	FB02	1-414-232-11	INDUCTOR, FERRITE BEAD		
C71	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	<FILTER>				
C72	1-163-038-91	CERAMIC CHIP 0.1MF		25V	FL01	1-239-882-11	FILTER, LOW PASS		
C73	1-163-014-00	CERAMIC CHIP 0.0027MF	10%	50V	FL02	1-236-071-41	ENCAPSULATED COMPONENT		
C74	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	FL03	1-236-071-41	ENCAPSULATED COMPONENT		
C75	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	FL04	1-236-071-41	ENCAPSULATED COMPONENT		
C76	1-163-253-11	CERAMIC CHIP 120PF	5%	50V	FL05	1-236-071-41	ENCAPSULATED COMPONENT		
C77	1-126-964-11	ELECT 10MF	20%	50V	FL06	1-236-071-41	ENCAPSULATED COMPONENT		
C79	1-126-964-11	ELECT 10MF	20%	50V	FL08	1-236-071-41	ENCAPSULATED COMPONENT		
C82	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	FL09	1-239-881-11	FILTER, LOW PASS		
C84	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	FL10	1-239-881-11	FILTER, LOW PASS		
C85	1-163-038-91	CERAMIC CHIP 0.1MF		25V	FL11	1-239-883-11	FILTER, LOW PASS		
C86	1-163-038-91	CERAMIC CHIP 0.1MF		25V	<IC>				
C87	1-163-038-91	CERAMIC CHIP 0.1MF		25V	IC01	8-759-257-59	IC TDA8755T-T		
C88	1-163-038-91	CERAMIC CHIP 0.1MF		25V	IC02	8-759-280-76	IC ZA2970-26DTR		
C89	1-163-038-91	CERAMIC CHIP 0.1MF		25V	IC03	8-759-280-76	IC ZA2970-26DTR		
C90	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	IC04	8-759-257-61	IC SAA4940B-T		
C91	1-126-964-11	ELECT 10MF	20%	50V					
C92	1-163-038-91	CERAMIC CHIP 0.1MF		25V					
C93	1-163-038-91	CERAMIC CHIP 0.1MF		25V					
C94	1-126-233-11	ELECT 22MF	20%	50V					
C95	1-163-038-91	CERAMIC CHIP 0.1MF		25V					
C96	1-126-233-11	ELECT 22MF	20%	50V					
C97	1-163-038-91	CERAMIC CHIP 0.1MF		25V					
C98	1-126-233-11	ELECT 22MF	20%	50V					
C99	1-163-038-91	CERAMIC CHIP 0.1MF		25V					
C1001	1-163-038-91	CERAMIC CHIP 0.1MF		25V					

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC06	8-759-257-92	IC SAA4951WP/V1-T		L10	1-426-801-21	TRANSFORMER, DETECTOR	
IC07	8-759-297-15	IC P83C652FBA-V3/AB517		L14	1-408-409-00	INDUCTOR 100H	
IC08	8-759-708-05	IC NJM78L05A		L15	1-408-409-00	INDUCTOR 100H	
IC10	8-759-033-03	IC MC74F08M		L16	1-408-409-00	INDUCTOR 100H	
IC11	8-759-708-05	IC NJM78L05A		L1001	1-410-989-11	INDUCTOR CHIP 0.47UH	
IC12	8-759-267-22	IC MC14046BDWR2					
IC13	8-759-238-87	IC TC4S66F (TE85R)				<TRANSISTOR>	
IC14	8-759-708-05	IC NJM78L05A		Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
IC15	8-759-238-87	IC TC4S66F (TE85R)		Q03	8-729-216-22	TRANSISTOR 2SA1162-G	
IC16	8-759-033-03	IC MC74F08M		Q04	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC17	8-759-257-63	IC SAA7158WP-T		Q05	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC18	8-759-708-05	IC NJM78L05A		Q06	8-729-216-22	TRANSISTOR 2SA1162-G	
IC19	8-759-238-87	IC TC4S66F (TE85R)		Q07	8-729-901-01	TRANSISTOR DTC144EX	
IC20	8-759-238-87	IC TC4S66F (TE85R)		Q08	8-729-025-25	TRANSISTOR BF550	
IC23	8-752-012-52	IC CX20125		Q09	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC24	8-759-710-86	IC NJM2233BM		Q10	8-729-025-25	TRANSISTOR BF550	
IC25	8-759-042-02	IC S-80743AL-A7-S		Q11	8-729-025-25	TRANSISTOR BF550	
		<CONDUCTOR CHIP>		Q12	8-729-216-22	TRANSISTOR 2SA1162-G	
JR15	1-216-295-00	CONDUCTOR, CHIP		Q13	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR17	1-216-295-00	CONDUCTOR, CHIP		Q14	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR19	1-216-295-00	CONDUCTOR, CHIP		Q15	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR20	1-216-295-00	CONDUCTOR, CHIP		Q16	8-729-216-22	TRANSISTOR 2SA1162-G	
JR22	1-216-295-00	CONDUCTOR, CHIP		Q17	8-729-901-01	TRANSISTOR DTC144EX	
JR23	1-216-295-00	CONDUCTOR, CHIP		Q18	8-729-901-01	TRANSISTOR DTC144EX	
JR24	1-216-295-00	CONDUCTOR, CHIP		Q19	8-729-216-22	TRANSISTOR 2SA1162-G	
JR25	1-216-295-00	CONDUCTOR, CHIP		Q20	8-729-216-22	TRANSISTOR 2SA1162-G	
JR26	1-216-295-00	CONDUCTOR, CHIP		Q21	8-729-216-22	TRANSISTOR 2SA1162-G	
JR30	1-216-295-00	CONDUCTOR, CHIP		Q22	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR31	1-216-295-00	CONDUCTOR, CHIP		Q23	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR33	1-216-295-00	CONDUCTOR, CHIP		Q24	8-729-901-01	TRANSISTOR DTC144EX	
JR35	1-216-295-00	CONDUCTOR, CHIP		Q27	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR36	1-216-295-00	CONDUCTOR, CHIP		Q28	8-729-216-22	TRANSISTOR 2SA1162-G	
JR37	1-216-295-00	CONDUCTOR, CHIP		Q29	8-729-901-01	TRANSISTOR DTC144EX	
JR39	1-216-295-00	CONDUCTOR, CHIP		Q30	8-729-920-74	TRANSISTOR 2SC2412K-QR	
JR40	1-216-295-00	CONDUCTOR, CHIP				<RESISTOR>	
JR43	1-216-295-00	CONDUCTOR, CHIP		R02	1-216-295-00	CONDUCTOR, CHIP	
JR44	1-216-295-00	CONDUCTOR, CHIP		R04	1-216-113-00	METAL GLAZE 470K 5%	1/10W
JR45	1-216-295-00	CONDUCTOR, CHIP		R05	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR46	1-216-295-00	CONDUCTOR, CHIP		R07	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR47	1-216-295-00	CONDUCTOR, CHIP		R08	1-216-047-00	METAL GLAZE 820 5%	1/10W
JR48	1-216-295-00	CONDUCTOR, CHIP		R09	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR49	1-216-295-00	CONDUCTOR, CHIP		R10	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR50	1-216-295-00	CONDUCTOR, CHIP		R11	1-216-045-00	METAL GLAZE 680 5%	1/10W
JR51	1-216-295-00	CONDUCTOR, CHIP		R12	1-216-041-00	METAL GLAZE 470 5%	1/10W
JR52	1-216-295-00	CONDUCTOR, CHIP		R13	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
JR53	1-216-295-00	CONDUCTOR, CHIP		R14	1-216-041-00	METAL GLAZE 470 5%	1/10W
JR54	1-216-295-00	CONDUCTOR, CHIP		R15	1-216-047-00	METAL GLAZE 820 5%	1/10W
JR55	1-216-295-00	CONDUCTOR, CHIP		R16	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
JR56	1-216-295-00	CONDUCTOR, CHIP		R20	1-216-035-00	METAL GLAZE 270 5%	1/10W
JR57	1-216-295-00	CONDUCTOR, CHIP		R21	1-216-045-00	METAL GLAZE 680 5%	1/10W
JR58	1-216-295-00	CONDUCTOR, CHIP		R22	1-216-017-00	METAL GLAZE 47 5%	1/10W
		<COIL>		R23	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
L01	1-410-435-21	INDUCTOR 220UH		R24	1-216-025-00	METAL GLAZE 100 5%	1/10W
L02	1-410-435-21	INDUCTOR 220UH		R25	1-216-047-00	METAL GLAZE 820 5%	1/10W
L04	1-408-409-00	INDUCTOR 100H		R26	1-216-025-00	METAL GLAZE 100 5%	1/10W
L05	1-426-942-11	TRANSFORMER, DETECTOR		R27	1-216-025-00	METAL GLAZE 100 5%	1/10W
L06	1-426-941-11	TRANSFORMER, DETECTOR		R28	1-216-001-00	METAL GLAZE 10 5%	1/10W
L07	1-426-803-21	TRANSFORMER, DETECTOR		R29	1-216-085-00	METAL GLAZE 33K 5%	1/10W
L08	1-408-409-00	INDUCTOR 100H		R30	1-216-295-00	CONDUCTOR, CHIP	
L09	1-408-409-00	INDUCTOR 100H		R33	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R34	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1010	1-216-043-00	METAL GLAZE	560 5% 1/10W
R35	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1012	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R36	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1013	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R37	1-216-001-00	METAL GLAZE	10 5% 1/10W	R1014	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R38	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1015	1-216-047-00	METAL GLAZE	820 5% 1/10W
R39	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R1016	1-216-017-00	METAL GLAZE	47 5% 1/10W
R40	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1017	1-216-025-00	METAL GLAZE	100 5% 1/10W
R41	1-216-295-00	CONDCTOR, CHIP		R1018	1-216-017-00	METAL GLAZE	47 5% 1/10W
R42	1-216-295-00	CONDCTOR, CHIP		R1019	1-216-017-00	METAL GLAZE	47 5% 1/10W
R43	1-216-043-00	METAL GLAZE	560 5% 1/10W	R1020	1-216-045-00	METAL GLAZE	680 5% 1/10W
R44	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1021	1-216-025-00	METAL GLAZE	100 5% 1/10W
R45	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1022	1-216-001-00	METAL GLAZE	10 5% 1/10W
R46	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R1024	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R47	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R1026	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R48	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1027	1-216-033-00	METAL GLAZE	220 5% 1/10W
R49	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1028	1-216-037-00	METAL GLAZE	330 5% 1/10W
R54	1-216-001-00	METAL GLAZE	10 5% 1/10W	R1029	1-216-037-00	METAL GLAZE	330 5% 1/10W
R55	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1030	1-216-025-00	METAL GLAZE	100 5% 1/10W
R56	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1031	1-216-045-00	METAL GLAZE	680 5% 1/10W
R57	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1032	1-216-045-00	METAL GLAZE	680 5% 1/10W
R58	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1033	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R59	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R1038	1-216-295-00	CONDCTOR, CHIP	
R60	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1039	1-216-295-00	CONDCTOR, CHIP	
R61	1-216-099-00	METAL GLAZE	120K 5% 1/10W	R1040	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R62	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R1041	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R65	1-216-001-00	METAL GLAZE	10 5% 1/10W	R1042	1-216-025-00	METAL GLAZE	100 5% 1/10W
R66	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1043	1-216-025-00	METAL GLAZE	100 5% 1/10W
R67	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1044	1-216-025-00	METAL GLAZE	100 5% 1/10W
R68	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1045	1-216-025-00	METAL GLAZE	100 5% 1/10W
R69	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1046	1-216-025-00	METAL GLAZE	100 5% 1/10W
R70	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R1047	1-216-025-00	METAL GLAZE	100 5% 1/10W
R71	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R1048	1-216-025-00	METAL GLAZE	100 5% 1/10W
R72	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1049	1-216-025-00	METAL GLAZE	100 5% 1/10W
R73	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1050	1-216-295-00	CONDCTOR, CHIP	
R74	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1052	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R75	1-216-039-00	METAL GLAZE	390 5% 1/10W	R1053	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R76	1-216-039-00	METAL GLAZE	390 5% 1/10W	R1054	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R77	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R1055	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R78	1-216-037-00	METAL GLAZE	330 5% 1/10W	R1056	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R79	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1057	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R80	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1060	1-216-043-00	METAL GLAZE	560 5% 1/10W
R81	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R1061	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R83	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1062	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R84	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1063	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R85	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1064	1-216-295-00	CONDCTOR, CHIP	
R87	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1065	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R89	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1066	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R90	1-216-039-00	METAL GLAZE	390 5% 1/10W	R1067	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R91	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1068	1-216-025-00	METAL GLAZE	100 5% 1/10W
R92	1-216-039-00	METAL GLAZE	390 5% 1/10W	R1069	1-216-025-00	METAL GLAZE	100 5% 1/10W
R93	1-216-039-00	METAL GLAZE	390 5% 1/10W	R1070	1-216-025-00	METAL GLAZE	100 5% 1/10W
R94	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1071	1-216-025-00	METAL GLAZE	100 5% 1/10W
R95	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1072	1-216-025-00	METAL GLAZE	100 5% 1/10W
R96	1-216-295-00	CONDCTOR, CHIP		R1073	1-216-025-00	METAL GLAZE	100 5% 1/10W
R99	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1074	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1001	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1075	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1002	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1076	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1003	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1077	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1004	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1078	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1005	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1079	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1006	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1080	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1007	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1081	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1008	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1082	1-216-025-00	METAL GLAZE	100 5% 1/10W
R1009	1-216-043-00	METAL GLAZE	560 5% 1/10W				

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R1083	1-216-025-00	METAL GLAZE	100 5% 1/10W	<IF BLOCK>			
R1084	1-216-045-00	METAL GLAZE	680 5% 1/10W	IF101	1-466-677-11	IF BLOCK (IFF-380)	
R1085	1-216-041-00	METAL GLAZE	470 5% 1/10W	IF102	1-466-138-11	IF BLOCK (IFF-380A)	(KV-W32MN11/MH11)
R1086	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	<COIL>			
R1087	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	L101	1-408-417-00	INDUCTOR	47UH
R1088	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	L102	1-408-417-00	INDUCTOR	47UH
R1089	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	L103	1-408-417-00	INDUCTOR	47UH (KV-W32MN11/MH11)
R1091	1-216-025-00	METAL GLAZE	100 5% 1/10W	L104	1-408-417-00	INDUCTOR	47UH (KV-W32MN11/MH11)
<CRYSTAL>				L105	1-408-417-00	INDUCTOR	47UH (KV-W32MN11/MH11)
X1	1-578-774-11	VIBRATOR, CRYSTAL		L106	1-408-417-00	INDUCTOR	47UH
*****				<TRANSISTOR>			
*A-1297-417-A	A2 BOARD, COMPLETE	(KV-W28MN11/MH11)		Q101	8-729-216-22	TRANSISTOR 2SA1162-G	
*A-1297-419-A	A2 BOARD, COMPLETE	(KV-W32MN11/MH11)		<RESISTOR>			
<CAPACITOR>				R102	1-216-464-11	METAL OXIDE	18K 5% 2W F
C101	1-124-126-00	ELECT	47MF 20% 16V	R103	1-216-081-00	METAL GLAZE	22K 5% 1/10W
C102	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	R104	1-216-033-00	METAL GLAZE	220 5% 1/10W
C103	1-163-031-11	CERAMIC CHIP	0.01MF 50V	R105	1-216-033-00	METAL GLAZE	220 5% 1/10W
C104	1-126-967-11	ELECT	47MF 20% 50V	R106	1-216-073-00	METAL GLAZE	10K 5% 1/10W
C105	1-126-967-11	ELECT	47MF 20% 50V	R107	1-216-073-00	METAL GLAZE	10K 5% 1/10W
C106	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	R108	1-216-077-00	METAL GLAZE	15K 5% 1/10W
C107	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	R109	1-216-033-00	METAL GLAZE	220 5% 1/10W
C108	1-126-233-11	ELECT	22MF (KV-W32MN11/MH11) 20% 50V (KV-W32MN11/MH11)	R110	1-216-033-00	METAL GLAZE	220 5% (KV-W32MN11/MH11) 1/10W
C109	1-126-233-11	ELECT	22MF 20% 50V	R111	1-216-073-00	METAL GLAZE	10K 5% (KV-W32MN11/MH11) 1/10W
C110	1-124-126-00	ELECT	47MF 20% 16V (KV-W32MN11/MH11)	R112	1-216-121-00	METAL GLAZE	1M 5% (KV-W32MN11/MH11) 1/10W
C111	1-163-005-11	CERAMIC CHIP	470PF 10% 50V (KV-W32MN11/MH11)	R113	1-216-097-00	METAL GLAZE	100K 5% 1/10W
C112	1-124-903-11	ELECT	1MF 20% 50V	R114	1-216-099-00	METAL GLAZE	120K 5% 1/10W
C113	1-124-126-00	ELECT	47MF 20% 16V (KV-W32MN11/MH11)	R115	1-216-097-00	METAL GLAZE	100K 5% 1/10W
C114	1-163-005-11	CERAMIC CHIP	470PF 10% 50V (KV-W32MN11/MH11)	R116	1-216-045-00	METAL GLAZE	680 5% 1/10W
C115	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	R117	1-216-081-00	METAL GLAZE	22K 5% (KV-W32MN11/MH11)
C116	1-124-126-00	ELECT	47MF 20% 16V (KV-W32MN11/MH11)	<TUNER>			
C117	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	TU101A	8-598-270-00	TUNER ET BTP-06421	(KV-W32MN11/MH11)
C118	1-124-126-00	ELECT	47MF 20% 16V	TU102A	8-598-270-00	TUNER ET BTP-06421	(KV-W32MN11/MH11)
C119	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V	*****			
C120	1-163-001-11	CERAMIC CHIP	220PF 10% 50V	*A-1297-418-A	A BOARD, COMPLETE		
C121	1-124-126-00	ELECT	47MF 20% 16V (KV-W32MN11/MH11)	*****			
C122	1-163-005-11	CERAMIC CHIP	470PF 10% 50V (KV-W32MN11/MH11)	4-382-854-11	SCREW (M3X10), P, SW (+)		
C123	1-124-126-00	ELECT	47MF 20% 16V	<CAPACITOR>			
C124	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	C001	1-126-204-11	ELECT	47MF 20% 16V
<CONNECTOR>				C002	1-126-233-11	ELECT	22MF 20% 50V
CN101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P		C003	1-104-664-11	ELECT	47MF 20% 25V
CN102	1-695-915-11	TAB (CONTACT)		C004	1-164-161-11	CERAMIC CHIP	0.0022MF 10% 50V
<DIODE>				C005	1-124-126-00	ELECT	47MF 20% 16V
D101	8-719-119-22	DIODE RD33F-T7B1		C006	1-163-099-00	CERAMIC CHIP	18PF 5% 50V
				C007	1-163-099-00	CERAMIC CHIP	18PF 5% 50V
				C008	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
				C009	1-163-033-91	CERAMIC CHIP	0.022MF 50V
				C010	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V

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The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C011	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C653	1-126-953-11	ELECT 2200MF 20% 35V
C012	1-164-346-11	CERAMIC CHIP 1MF		16V	C654	1-162-318-11	CERAMIC 0.001MF 10% 500V
C029	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	C655	1-128-548-11	ELECT 4700MF 20% 25V
C037	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C656	1-126-929-11	ELECT 4700MF 20% 10V
C040	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	C658	1-124-347-00	ELECT 100MF 20% 160V
C041	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	C659	1-126-967-11	ELECT 47MF 20% 50V
C042	1-164-346-11	CERAMIC CHIP 1MF		16V	C660	1-126-233-11	ELECT 22MF 20% 50V
C057	1-124-902-00	ELECT 0.47MF	20%	50V	C661	1-102-030-00	CERAMIC 330PF 10% 500V
C104	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	C662	1-106-347-00	MYLAR 0.0015MF 10% 100V
C105	1-124-126-00	ELECT 47MF	20%	16V	C663	1-104-666-11	ELECT 220MF 20% 25V
C268	1-126-934-11	ELECT 220MF	20%	16V	C664	1-124-916-11	ELECT 22MF 20% 25V
C269	1-124-126-00	ELECT 47MF	20%	16V	C665	1-124-903-11	ELECT 1MF 20% 50V
C270	1-126-933-11	ELECT 100MF	20%	16V	C667	1-164-645-11	CERAMIC 1000PF 10% 500V
C271	1-164-005-11	CERAMIC CHIP 0.47MF		25V	C668	1-164-645-11	CERAMIC 1000PF 10% 500V
C301	1-164-346-11	CERAMIC CHIP 1MF		16V	C669	1-164-645-11	CERAMIC 1000PF 10% 500V
C302	1-164-346-11	CERAMIC CHIP 1MF		16V	C670	1-164-645-11	CERAMIC 1000PF 10% 500V
C303	1-164-346-11	CERAMIC CHIP 1MF		16V	C1200	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V
C304	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C1201	1-163-229-11	CERAMIC CHIP 12PF 5% 50V
C305	1-126-934-11	ELECT 220MF	20%	16V	C1202	1-163-097-00	CERAMIC CHIP 15PF 5% 50V
C306	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C1203	1-163-031-11	CERAMIC CHIP 0.01MF 50V
C307	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C1204	1-124-126-00	ELECT 47MF 20% 16V
C308	1-164-005-11	CERAMIC CHIP 0.47MF		25V	C1205	1-164-222-11	CERAMIC CHIP 0.22MF 25V
C310	1-164-346-11	CERAMIC CHIP 1MF		16V	C1206	1-164-005-11	CERAMIC CHIP 0.47MF 25V
C311	1-164-346-11	CERAMIC CHIP 1MF		16V	C1207	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C312	1-164-346-11	CERAMIC CHIP 1MF		16V	C1208	1-126-964-11	ELECT 10MF 20% 50V
C313	1-124-927-11	ELECT 4.7MF	20%	50V	C1209	1-163-005-11	CERAMIC CHIP 470PF 10% 50V
C314	1-124-903-11	ELECT 1MF	20%	50V	C1210	1-163-005-11	CERAMIC CHIP 470PF 10% 50V
C315	1-164-336-11	CERAMIC CHIP 0.33MF		25V	C1211	1-126-111-11	ELECT 3.3MF 20% 50V
C316	1-164-346-11	CERAMIC CHIP 1MF		16V	C1212	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C317	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C1213	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C318	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C1214	1-126-233-11	ELECT 22MF 20% 50V
C319	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C1215	1-126-964-11	ELECT 10MF 20% 50V
C320	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	C1219	1-163-131-00	CERAMIC CHIP 390PF 5% 50V
C321	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	C1220	1-163-131-00	CERAMIC CHIP 390PF 5% 50V
C322	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	C1221	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V
C325	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C1222	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V
C327	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C1225	1-126-233-11	ELECT 22MF 20% 50V
C328	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C1226	1-124-126-00	ELECT 47MF 20% 16V
C329	1-164-346-11	CERAMIC CHIP 1MF		16V	C1227	1-126-933-11	ELECT 100MF 20% 16V
C331	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	C1228	1-164-222-11	CERAMIC CHIP 0.22MF 25V
C336	1-164-346-11	CERAMIC CHIP 1MF		16V	C1229	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C337	1-164-346-11	CERAMIC CHIP 1MF		16V	C1230	1-163-137-00	CERAMIC CHIP 680PF 5% 50V
C338	1-164-346-11	CERAMIC CHIP 1MF		16V	C1231	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C339	1-164-346-11	CERAMIC CHIP 1MF		16V	C1232	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C601	1-137-479-11	FILM 1MF	10%	400V	C1233	1-163-031-11	CERAMIC CHIP 0.01MF 50V
C602	1-124-927-11	ELECT 4.7MF	20%	50V	C1234	1-164-005-11	CERAMIC CHIP 0.47MF 25V
C603	1-124-463-00	ELECT 0.1MF	20%	50V	C1235	1-164-005-11	CERAMIC CHIP 0.47MF 25V
C604	1-126-233-11	ELECT 22MF	20%	50V	C1238	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V
C605	1-136-481-11	FILM 0.0022MF	2%	50V	C1239	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V
C607	1-127-530-11	ELECT (SOLID) 22MF	20%	20V	C1240	1-164-005-11	CERAMIC CHIP 0.47MF 25V
C608	1-126-233-11	ELECT 22MF	20%	50V	C1241	1-164-005-11	CERAMIC CHIP 0.47MF 25V
C609	1-136-165-00	FILM 0.1MF	5%	50V	C1243	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C610	1-164-625-11	CERAMIC 680PF	10%	500V	C1247	1-126-233-11	ELECT 22MF 20% 50V
C611	1-164-625-11	CERAMIC 680PF	10%	500V	C1252	1-163-031-11	CERAMIC CHIP 0.01MF 50V
C612	1-126-964-11	ELECT 10MF	20%	50V	C1254	1-163-033-91	CERAMIC CHIP 0.022MF 50V
C613	1-107-910-11	ELECT 100MF	20%	50V	C1255	1-163-809-11	CERAMIC CHIP 0.047MF 10% 25V
C614	1-165-127-11	CERAMIC 470PF	10%	500V	C2001	1-124-126-00	ELECT 47MF 20% 16V
C615	1-137-219-11	FILM 0.015MF	5%	0	C2003	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C616	1-137-219-11	FILM 0.015MF	5%	0	C2004	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C619	1-104-760-11	CERAMIC CHIP 0.047MF	10%	50V	C2005	1-163-251-11	CERAMIC CHIP 100PF 5% 50V
C620	1-104-760-11	CERAMIC CHIP 0.047MF	10%	50V	C2009	1-164-346-11	CERAMIC CHIP 1MF 16V
C624	1-126-964-11	ELECT 10MF	20%	50V	C2010	1-163-038-91	CERAMIC CHIP 0.1MF 25V
C652	1-126-953-11	ELECT 2200MF	20%	35V	C2011	1-163-038-91	CERAMIC CHIP 0.1MF 25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C2012	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V	D615	8-719-404-46	DIODE MA110
C2014	1-126-964-11	ELECT 10MF	20%	50V	D616	8-719-404-46	DIODE MA110
C2015	1-163-038-91	CERAMIC CHIP 0.1MF		25V	D651	8-719-047-31	DIODE RBA-402L
C2016	1-126-964-11	ELECT 10MF	20%	50V	D652	8-719-312-47	DIODE RBA-404B
C2017	1-163-229-11	CERAMIC CHIP 12PF	5%	50V	D654	8-719-047-31	DIODE RBA-402L
C2018	1-163-038-91	CERAMIC CHIP 0.1MF		25V	D655	8-719-510-48	DIODE D1N20R
C2601	1-104-664-11	ELECT 47MF	20%	25V	D656	8-719-404-46	DIODE MA110
C2602	1-104-664-11	ELECT 47MF	20%	25V	D657	8-719-404-46	DIODE MA110
C2603	1-104-664-11	ELECT 47MF	20%	25V			
C2604	1-104-664-11	ELECT 47MF	20%	25V			
C2605	1-104-664-11	ELECT 47MF	20%	25V			
		<CONNECTOR>				<FERRITE BEAD>	
CN101	*1-564-512-11	PLUG, CONNECTOR 9P			FB001	1-414-235-11	INDUCTOR, FERRITE BEAD
CN102	*1-764-177-11	PIN, CONNECTOR (SMD)(1.5MM) 7P			FB002	1-414-235-11	INDUCTOR, FERRITE BEAD
CN107	*1-564-509-11	PLUG, CONNECTOR 6P			FB003	1-414-235-11	INDUCTOR, FERRITE BEAD
CN118	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			FB004	1-414-235-11	INDUCTOR, FERRITE BEAD
CN119	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			FB005	1-414-235-11	INDUCTOR, FERRITE BEAD
CN120	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			FB006	1-414-235-11	INDUCTOR, FERRITE BEAD
CN121	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			FB007	1-414-235-11	INDUCTOR, FERRITE BEAD
CN123	*1-564-511-11	PLUG, CONNECTOR 8P			FB008	1-414-235-11	INDUCTOR, FERRITE BEAD
CN128	*1-564-506-11	PLUG, CONNECTOR 3P			FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN131	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			FB603	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN132	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			FB604	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN133	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			FB605	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN134	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			FB608	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN135	*1-564-508-11	PLUG, CONNECTOR 5P			FB651	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN136	*1-564-509-11	PLUG, CONNECTOR 6P			FB652	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN137	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			FB653	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
CN601	1-766-964-11	PIN, CONNECTOR (PC BOARD) 6P			FB655	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
		<DIODE>			FB1200	1-414-235-11	INDUCTOR, FERRITE BEAD
D011	8-719-914-43	DIODE DAN202K			FB1201	1-414-234-11	INDUCTOR, FERRITE BEAD
D201	8-719-404-46	DIODE MA110					
D202	8-719-914-42	DIODE DA204K					
D203	8-719-404-46	DIODE MA110					
D204	8-719-404-46	DIODE MA110					
D301	8-719-914-43	DIODE DAN202K					
D302	8-719-914-43	DIODE DAN202K					
D303	8-719-914-43	DIODE DAN202K					
D304	8-719-914-43	DIODE DAN202K					
D306	8-719-914-43	DIODE DAN202K					
D307	8-719-404-46	DIODE MA110					
D308	8-719-404-46	DIODE MA110					
D309	8-719-404-46	DIODE MA110					
D310	8-719-404-46	DIODE MA110					
D311	8-719-404-46	DIODE MA110					
D312	8-719-404-46	DIODE MA110					
D601	8-719-979-58	DIODE EGP10D					
D602	8-719-402-72	DIODE MA3180M-TX					
D603	8-719-979-58	DIODE EGP10D					
D604	8-719-402-72	DIODE MA3180M-TX					
D605	8-719-402-72	DIODE MA3180M-TX					
D606	8-719-402-72	DIODE MA3180M-TX					
D607	8-719-404-46	DIODE MA110					
D608	8-719-404-46	DIODE MA110					
D609	8-719-118-15	DIODE RD36M-B					
D610	8-719-510-48	DIODE D1N20R					
D611	8-719-510-48	DIODE D1N20R					
D612	8-719-404-46	DIODE MA110					
D613	8-719-979-58	DIODE EGP10D					
D614	8-719-106-89	DIODE RD15M-B2					
						<FILTER>	
					FL1201	1-239-803-41	ENCAPSULATED COMPONENT
						<IC>	
					IC001	8-759-708-05	IC NJM78L05A
					IC002	8-759-165-37	IC X24164SIC7000
					IC003	8-752-857-45	IC CXP85340A-SV4918
					IC004	8-759-042-02	IC S-80743AL-A7-S
					IC301	8-759-300-71	IC HD140538FP
					IC302	8-759-257-62	IC TDA4686
					IC303	8-759-909-71	IC BA4558F
					IC601	8-759-297-44	IC MC33025P
					IC602	8-759-185-47	IC IR2112
					IC650	1-810-477-11	POWER MODULE (DM-48)
					IC651	8-749-010-65	PHOTO COUPLER PC123FY2
					IC652	8-759-420-19	IC AN1431T
					IC1201	8-759-285-19	IC MSP3410TE-L
					IC1202	8-759-708-08	IC NJM78L08A
					IC2001	8-759-285-20	IC TPU3040TE-L
						1-251-256-11	SOCKET, IC; IC2001
					IC2002	8-759-288-09	IC MB81C1000A-80PSZ
					IC2601	8-759-518-68	IC PQ12RF21
					IC2602	8-759-701-59	IC NJM78M09FA
					IC2603	8-749-010-55	IC PQ05RH1
						<CONDUCTOR CHIP>	
					JR1202	1-216-295-00	CONDUCTOR, CHIP
					JR1203	1-216-295-00	CONDUCTOR, CHIP

A

REF. NO. PART NO. DESCRIPTION

<COIL>

L002 1-408-609-41 INDUCTOR 33UH
L003 1-408-404-00 INDUCTOR 3.9UH
L101 1-408-417-00 INDUCTOR 47UH
L651 1-412-525-21 INDUCTOR 10UH
L652 1-412-525-21 INDUCTOR 10UH

L653 1-412-525-21 INDUCTOR 10UH
L654 1-412-525-21 INDUCTOR 10UH
L655 1-412-525-21 INDUCTOR 10UH
L1202 1-408-417-00 INDUCTOR 47UH
L1203 1-408-408-00 INDUCTOR 8.2UH

L1204 1-408-397-00 INDUCTOR 1UH
L1205 1-408-408-00 INDUCTOR 8.2UH
L2001 1-408-609-41 INDUCTOR 33UH

<IC LINK>

PS651 1-532-686-21 LINK, IC

<TRANSISTOR>

Q101 8-729-901-01 TRANSISTOR DTC144EK
Q203 8-729-216-22 TRANSISTOR 2SA1162-G
Q204 8-729-216-22 TRANSISTOR 2SA1162-G
Q301 8-729-216-22 TRANSISTOR 2SA1162-G
Q302 8-729-216-22 TRANSISTOR 2SA1162-G

Q303 8-729-216-22 TRANSISTOR 2SA1162-G
Q304 8-729-900-53 TRANSISTOR DTC114EK
Q305 8-729-216-22 TRANSISTOR 2SA1162-G
Q306 8-729-230-49 TRANSISTOR 2SC2712-YG
Q307 8-729-230-49 TRANSISTOR 2SC2712-YG

Q308 8-729-230-49 TRANSISTOR 2SC2712-YG
Q309 8-729-216-22 TRANSISTOR 2SA1162-G
Q310 8-729-900-53 TRANSISTOR DTC114EK
Q311 8-729-900-53 TRANSISTOR DTC114EK
Q312 8-729-230-49 TRANSISTOR 2SC2712-YG

Q313 8-729-230-49 TRANSISTOR 2SC2712-YG
Q314 8-729-230-49 TRANSISTOR 2SC2712-YG
Q315 8-729-900-53 TRANSISTOR DTC114EK
Q316 8-729-900-53 TRANSISTOR DTC114EK
Q317 8-729-900-53 TRANSISTOR DTC114EK

Q318 8-729-900-53 TRANSISTOR DTC114EK
Q319 8-729-230-49 TRANSISTOR 2SC2712-YG
Q320 8-729-230-49 TRANSISTOR 2SC2712-YG
Q321 8-729-230-49 TRANSISTOR 2SC2712-YG
Q322 8-729-216-22 TRANSISTOR 2SA1162-G

Q601 8-729-216-22 TRANSISTOR 2SA1162-G
Q602 8-729-216-22 TRANSISTOR 2SA1162-G
Q603 8-729-216-22 TRANSISTOR 2SA1162-G
Q604 8-729-230-49 TRANSISTOR 2SC2712-YG
Q605 8-729-028-10 TRANSISTOR IRF1744G-LF

Q606 8-729-028-10 TRANSISTOR IRF1744G-LF
Q607 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q608 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q611 8-729-230-49 TRANSISTOR 2SC2712-YG
Q612 8-729-209-15 TRANSISTOR 2SD2012

Q651 8-729-216-22 TRANSISTOR 2SA1162-G
Q652 8-729-230-49 TRANSISTOR 2SC2712-YG
Q653 8-729-230-49 TRANSISTOR 2SC2712-YG
Q1201 8-729-230-49 TRANSISTOR 2SC2712-YG
Q1202 8-729-230-49 TRANSISTOR 2SC2712-YG

Q1203 8-729-230-49 TRANSISTOR 2SC2712-YG
Q1204 8-729-216-22 TRANSISTOR 2SA1162-G

REMARK

REF. NO. PART NO. DESCRIPTION

REMARK

Q1205 8-729-216-22 TRANSISTOR 2SA1162-G
Q1206 8-729-216-22 TRANSISTOR 2SA1162-G
Q1207 8-729-216-22 TRANSISTOR 2SA1162-G

Q1208 8-729-216-22 TRANSISTOR 2SA1162-G
Q1209 8-729-230-49 TRANSISTOR 2SC2712-YG
Q1210 8-729-901-01 TRANSISTOR DTC144EK
Q2006 8-729-216-22 TRANSISTOR 2SA1162-G

<RESISTOR>

R001 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R002 1-216-073-00 METAL GLAZE 10K 5% 1/10W
R003 1-216-025-00 METAL GLAZE 100 5% 1/10W
R004 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R005 1-216-049-00 METAL GLAZE 1K 5% 1/10W

R006 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W
R007 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W
R008 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W
R009 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W
R010 1-216-025-00 METAL GLAZE 100 5% 1/10W

R011 1-216-025-00 METAL GLAZE 100 5% 1/10W
R012 1-216-025-00 METAL GLAZE 100 5% 1/10W
R013 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R014 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R015 1-216-049-00 METAL GLAZE 1K 5% 1/10W

R016 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R017 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R018 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R019 1-216-073-00 METAL GLAZE 10K 5% 1/10W
R020 1-216-049-00 METAL GLAZE 1K 5% 1/10W

R021 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W
R022 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W
R023 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W
R024 1-216-045-00 METAL GLAZE 680 5% 1/10W
R025 1-216-049-00 METAL GLAZE 1K 5% 1/10W

R026 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R027 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R028 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R029 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R030 1-216-049-00 METAL GLAZE 1K 5% 1/10W

R031 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R032 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R033 1-216-033-00 METAL GLAZE 220 5% 1/10W
R034 1-216-025-00 METAL GLAZE 100 5% 1/10W
R035 1-216-025-00 METAL GLAZE 100 5% 1/10W

R036 1-216-295-00 CONDUCTOR, CHIP
R037 1-216-033-00 METAL GLAZE 220 5% 1/10W
R038 1-216-089-00 METAL GLAZE 47K 5% 1/10W
R039 1-216-039-00 METAL GLAZE 390 5% 1/10W
R040 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W

R041 1-216-039-00 METAL GLAZE 390 5% 1/10W
R042 1-216-081-00 METAL GLAZE 22K 5% 1/10W
R043 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R044 1-216-033-00 METAL GLAZE 220 5% 1/10W
R045 1-216-025-00 METAL GLAZE 100 5% 1/10W

R046 1-216-039-00 METAL GLAZE 390 5% 1/10W
R047 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R048 1-216-025-00 METAL GLAZE 100 5% 1/10W
R049 1-216-025-00 METAL GLAZE 100 5% 1/10W
R050 1-216-121-00 METAL GLAZE 1M 5% 1/10W

R051 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R052 1-216-699-11 METAL CHIP 0.50% 1/10W
R053 1-216-049-00 METAL GLAZE 1K 5% 1/10W
R055 1-216-049-00 METAL GLAZE 1K 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R056	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R352	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R057	1-216-095-00	METAL GLAZE	82K 5% 1/10W	R353	1-216-025-00	METAL GLAZE	100 5% 1/10W
R058	1-216-033-00	METAL GLAZE	220 5% 1/10W	R354	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R059	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R355	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R060	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R356	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R061	1-218-756-11	METAL CHIP	150K 0.50% 1/10W	R357	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R062	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R358	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R063	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R359	1-218-753-11	METAL CHIP	110K 0.50% 1/10W
R064	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R360	1-216-699-11	METAL CHIP	100K 0.50% 1/10W
R066	1-216-033-00	METAL GLAZE	220 5% 1/10W	R361	1-216-043-00	METAL GLAZE	560 5% 1/10W
R071	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R362	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R072	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R601	1-247-903-00	CARBON	1M 5% 1/4W
R102	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R602	1-247-903-00	CARBON	1M 5% 1/4W
R251	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R603	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R252	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R604	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R253	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R605	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R254	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R606	1-249-426-11	CARBON	5.6K 5% 1/4W
R301	1-216-043-00	METAL GLAZE	560 5% 1/10W	R607	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
R302	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R608	1-216-664-11	METAL CHIP	3.6K 0.50% 1/10W
R303	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R609	1-216-689-11	METAL GLAZE	39K 5% 1/10W
R304	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R610	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R305	1-216-039-00	METAL GLAZE	390 5% 1/10W	R611	1-216-660-11	METAL CHIP	2.4K 0.50% 1/10W
R306	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R612	1-208-800-11	METAL CHIP	5.6K 0.50% 1/10W
R307	1-216-031-00	METAL GLAZE	180 5% 1/10W	R613	1-249-420-11	CARBON	1.8K 5% 1/4W
R308	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R614	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R309	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R615	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R310	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R616	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R311	1-216-043-00	METAL GLAZE	560 5% 1/10W	R618	1-216-198-91	METAL GLAZE	1K 5% 1/8W
R312	1-216-043-00	METAL GLAZE	560 5% 1/10W	R619	1-249-393-11	CARBON	10 5% 1/4W
R313	1-216-043-00	METAL GLAZE	560 5% 1/10W	R620	1-249-393-11	CARBON	10 5% 1/4W
R315	1-216-295-00	CONDUCTOR, CHIP		R621	1-249-397-11	CARBON	22 5% 1/4W F
R316	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R622	1-249-441-11	CARBON	100K 5% 1/4W
R317	1-216-033-00	METAL GLAZE	220 5% 1/10W	R623	1-249-397-11	CARBON	22 5% 1/4W F
R318	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R624	1-249-441-11	CARBON	100K 5% 1/4W
R320	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R626	1-219-440-11	RES, METAL PLATE	0.47
R321	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R627	1-215-882-00	METAL OXIDE	22 5% 2W F
R322	1-216-025-00	METAL GLAZE	100 5% 1/10W	R628	1-216-186-00	METAL GLAZE	330 5% 1/8W
R323	1-216-025-00	METAL GLAZE	100 5% 1/10W	R629	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R324	1-216-025-00	METAL GLAZE	100 5% 1/10W	R630	1-215-882-00	METAL OXIDE	22 5% 2W F
R325	1-216-025-00	METAL GLAZE	100 5% 1/10W	R631	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R326	1-216-025-00	METAL GLAZE	100 5% 1/10W	R632	1-216-186-00	METAL GLAZE	330 5% 1/8W
R327	1-216-043-00	METAL GLAZE	560 5% 1/10W	R633	1-216-352-11	METAL OXIDE	1.8 5% 1W F
R328	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R634	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R329	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R635	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R330	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R636	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R331	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R651	1-249-377-11	CARBON	0.47 5% 1/4W F
R332	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R652	1-249-417-11	CARBON	1K 5% 1/4W
R333	1-216-025-00	METAL GLAZE	100 5% 1/10W	R653	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R334	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R654	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R335	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R655	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R336	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R656	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R337	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R657	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R338	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R658	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R339	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R659	1-249-422-11	CARBON	2.7K 5% 1/4W F
R340	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R660	1-249-437-11	CARBON	47K 5% 1/4W
R343	1-216-295-00	CONDUCTOR, CHIP		R661	1-249-405-11	CARBON	100 5% 1/4W F
R344	1-216-295-00	CONDUCTOR, CHIP		R662	1-216-025-00	METAL GLAZE	100 5% 1/10W
R345	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R663	1-208-801-11	METAL CHIP	6.2K 0.50% 1/10W
R346	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R664	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R347	1-216-015-00	METAL GLAZE	39 5% 1/10W	R665	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R348	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R666	1-208-812-11	METAL CHIP	18K 0.50% 1/10W
R349	1-216-025-00	METAL GLAZE	100 5% 1/10W	R667	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R350	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R669	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R351	1-216-049-00	METAL GLAZE	1K 5% 1/10W				

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

A C

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R670	1-249-377-11	CARBON	0.47 5% 1/4W F	*A-1331-391-A	C BOARD, COMPLETE (KV-W28MN11/MH11)		
R671	1-249-377-11	CARBON	0.47 5% 1/4W F	*****			
R672	1-249-377-11	CARBON	0.47 5% 1/4W F	4-382-854-11	SCREW (M3X10), P, SW (+)		
R673	1-249-377-11	CARBON	0.47 5% 1/4W F				
R674	1-249-377-11	CARBON	0.47 5% 1/4W F				
R1200	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	<CAPACITOR>			
R1201	1-216-033-00	METAL GLAZE	220 5% 1/10W	C701	1-162-114-00	CERAMIC	0.0047MF 2KV
R1202	1-216-033-00	METAL GLAZE	220 5% 1/10W	C703	1-107-651-11	ELECT	4.7MF 20% 250V
R1204	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	C704	1-130-202-91	FILM	0.022MF 5% 400V
R1205	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	C711	1-102-947-00	CERAMIC	10PF 0.5PF 50V
R1206	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C712	1-102-820-00	CERAMIC	330PF 5% 50V
R1207	1-216-037-00	METAL GLAZE	330 5% 1/10W	C713	1-102-824-00	CERAMIC	470PF 5% 50V
R1208	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C714	1-102-820-00	CERAMIC	330PF 5% 50V
R1209	1-216-075-00	METAL GLAZE	12K 5% 1/10W	C716	1-126-933-11	ELECT	100MF 20% 16V
R1210	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	<CONNECTOR>			
R1211	1-216-027-00	METAL GLAZE	120 5% 1/10W	CN701	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
R1212	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	CN703	*1-564-511-11	PLUG, CONNECTOR 8P	
R1213	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	CN704	1-695-915-11	TAB (CONTACT)	
R1214	1-216-027-00	METAL GLAZE	120 5% 1/10W	<DIODE>			
R1215	1-216-295-00	CONDCTOR, CHIP		D701	8-719-911-19	DIODE 1SS119	
R1216	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	D702	8-719-911-19	DIODE 1SS119	
R1218	1-216-295-00	CONDCTOR, CHIP		D703	8-719-911-19	DIODE 1SS119	
R1219	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	D704	8-719-911-19	DIODE 1SS119	
R1221	1-216-295-00	CONDCTOR, CHIP		D705	8-719-911-19	DIODE 1SS119	
R1222	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	D706	8-719-911-19	DIODE 1SS119	
R1224	1-216-295-00	CONDCTOR, CHIP		D707	8-719-911-19	DIODE 1SS119	
R1225	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	D708	8-719-911-19	DIODE 1SS119	
R1226	1-216-045-00	METAL GLAZE	680 5% 1/10W	D709	8-719-911-19	DIODE 1SS119	
R1227	1-216-049-00	METAL GLAZE	1K 5% 1/10W	D710	8-719-911-19	DIODE 1SS119	
R1228	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	D711	8-719-911-19	DIODE 1SS119	
R1229	1-216-089-00	METAL GLAZE	47K 5% 1/10W	D712	8-719-911-19	DIODE 1SS119	
R1230	1-216-089-00	METAL GLAZE	47K 5% 1/10W	D714	8-719-110-03	DIODE RD7.5ESB2	
R2002	1-216-022-00	METAL GLAZE	75 5% 1/10W	<SOCKET>			
R2003	1-216-049-00	METAL GLAZE	1K 5% 1/10W	J701	Δ 1-540-223-11	SOCKET, PICTURE TUBE	
R2004	1-216-049-00	METAL GLAZE	1K 5% 1/10W	<COIL>			
R2005	1-216-049-00	METAL GLAZE	1K 5% 1/10W	L701	1-410-667-31	INDUCTOR 220H	
R2006	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	L703	1-408-412-00	INDUCTOR 180H	
R2007	1-216-049-00	METAL GLAZE	1K 5% 1/10W	L705	1-408-412-00	INDUCTOR 180H	
R2008	1-216-049-00	METAL GLAZE	1K 5% 1/10W	L707	1-408-412-00	INDUCTOR 180H	
R2009	1-216-049-00	METAL GLAZE	1K 5% 1/10W	<TRANSISTOR>			
R2017	1-216-049-00	METAL GLAZE	1K 5% 1/10W	Q701	8-729-326-11	TRANSISTOR 2SC2611	
R2018	1-216-033-00	METAL GLAZE	220 5% 1/10W	Q702	8-729-326-11	TRANSISTOR 2SC2611	
R2019	1-216-033-00	METAL GLAZE	220 5% 1/10W	Q703	8-729-326-11	TRANSISTOR 2SC2611	
R2020	1-216-025-00	METAL GLAZE	100 5% 1/10W	Q704	8-729-326-11	TRANSISTOR 2SC2611	
R2021	1-216-025-00	METAL GLAZE	100 5% 1/10W	Q705	8-729-326-11	TRANSISTOR 2SC2611	
R2025	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	Q706	8-729-326-11	TRANSISTOR 2SC2611	
R2026	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	Q707	8-729-200-17	TRANSISTOR 2SA1091-0	
R2027	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	Q708	8-729-200-17	TRANSISTOR 2SA1091-0	
R2601	1-216-097-00	METAL GLAZE	100K 5% 1/10W	Q709	8-729-200-17	TRANSISTOR 2SA1091-0	
<TRANSFORMER>				Q710	8-729-119-78	TRANSISTOR 2SC2785-HFE	
T650	Δ 1-426-970-11	TRANSFORMER, CONVERTER (PIT)		Q711	8-729-119-78	TRANSISTOR 2SC2785-HFE	
<CRYSTAL>				Q712	8-729-119-78	TRANSISTOR 2SC2785-HFE	
X001	1-760-180-11	VIBRATOR, CRYSTAL		Q714	8-729-255-12	TRANSISTOR 2SC2551-0	
X1200	1-760-535-21	VIBRATOR, CRYSTAL					
X2001	1-760-509-21	VIBRATOR, CRYSTAL					

*A-1331-389-A C BOARD, COMPLETE (KV-W32MN11/MH11)							

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

C D1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>							
R701	1-202-883-11	SOLID	680K 20% 1/2W	C2817	1-136-161-00	FILM	0.047MF 5% 50V
R702	1-202-838-00	SOLID	100K 20% 1/2W	C2818	1-129-765-00	FILM	0.047MF 10% 200V
R703	1-202-813-00	SOLID	22K 20% 1/2W	C2819	1-130-475-00	MYLAR	0.0022MF 5% 50V
R705	1-216-367-11	METAL OXIDE	0.68 5% 2W	C2820	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
R707	1-249-420-11	CARBON	1.8K 5% 1/4W	C2821	1-136-157-00	FILM	0.022MF 5% 50V
R708	1-249-420-11	CARBON	1.8K 5% 1/4W	C2822	1-136-177-00	FILM	1MF 5% 50V
R709	1-249-420-11	CARBON	1.8K 5% 1/4W	C2823	1-126-935-11	ELECT	470MF 20% 16V
R710	1-215-922-11	METAL OXIDE	6.8K 5% 3W	C2824	1-124-126-00	ELECT	47MF 20% 16V
R711	1-202-549-00	SOLID	100 20% 1/2W	(KV-W28MN11/MH11)			
R712	1-215-922-11	METAL OXIDE	6.8K 5% 3W	C2825	1-124-126-00	ELECT	47MF 20% 16V
R713	1-202-549-00	SOLID	100 20% 1/2W	(KV-W28MN11/MH11)			
R714	1-215-922-11	METAL OXIDE	6.8K 5% 3W	C2826	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R715	1-202-549-00	SOLID	100 20% 1/2W	(KV-W28MN11/MH11)			
R716	1-249-405-11	CARBON	100 5% 1/4W	C2827	1-163-020-00	CERAMIC CHIP	0.0082MF 10% 50V
R717	1-249-405-11	CARBON	100 5% 1/4W	C2901	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
R718	1-249-405-11	CARBON	100 5% 1/4W	C2902	1-163-809-11	CERAMIC CHIP	0.047MF 10% 25V
R720	1-249-417-11	CARBON	1K 5% 1/4W	C2903	1-129-763-91	FILM	0.033MF 10% 200V
R722	1-249-417-11	CARBON	1K 5% 1/4W	C2907	1-130-471-00	FILM	0.001MF 5% 50V
R724	1-249-417-11	CARBON	1K 5% 1/4W	C2908	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R725	1-249-423-11	CARBON	3.3K 5% 1/4W	C2916	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R726	1-249-423-11	CARBON	3.3K 5% 1/4W	C2918	1-102-110-00	CERAMIC	220PF 10% 50V
R727	1-249-421-11	CARBON	2.2K 5% 1/4W	C2922	1-129-704-91	FILM	0.0015MF 10% 630V
R728	1-249-408-11	CARBON	180 5% 1/4W	C2924	1-136-161-00	FILM	0.047MF 5% 50V
R729	1-249-408-11	CARBON	180 5% 1/4W	C4800	1-126-952-11	ELECT	1000MF 20% 16V
R730	1-249-408-11	CARBON	180 5% 1/4W	C4906	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R731	1-249-397-11	CARBON	22 5% 1/4W	C5801	1-126-964-11	ELECT	10MF 20% 50V
R732	1-249-397-11	CARBON	22 5% 1/4W	<CONNECTOR>			
R733	1-249-397-11	CARBON	22 5% 1/4W	CN2800	1-764-811-11	CONNECTOR, BOARD TO BOARD	10P
R734	Δ 1-202-549-81	SOLID	100 20% 1/2W	CN2801	*1-560-436-00	HORIZONTAL PIN ASSY	3P
R738	1-247-807-31	CARBON	100 5% 1/4W	CN2900	1-764-811-11	CONNECTOR, BOARD TO BOARD	10P
R739	1-247-807-31	CARBON	100 5% 1/4W	CN2901	1-564-524-11	PLUG, CONNECTOR	9P
R740	1-247-807-31	CARBON	100 5% 1/4W	CN5801	*1-564-518-11	PLUG, CONNECTOR	3P
R743	1-249-440-11	CARBON	82K 5% 1/4W	<DIODE>			
R747	1-216-489-11	METAL OXIDE	27K 5% 3W	D2802	8-719-911-19	DIODE	1SS119
R749	1-216-490-11	METAL OXIDE	39K 5% 3W	D2803	8-719-911-19	DIODE	1SS119
R751	1-215-926-00	METAL OXIDE	33K 5% 3W	D2804	8-719-510-64	DIODE	S2LA20F
R753	1-249-429-11	CARBON	10K 5% 1/4W	D2805	8-719-911-19	DIODE	1SS119
R763	1-247-887-00	CARBON	220K 5% 1/4W	D2806	8-719-911-19	DIODE	1SS119
R765	1-249-441-11	CARBON	100K 5% 1/4W	D2807	8-719-911-19	DIODE	1SS119
R766	1-249-441-11	CARBON	100K 5% 1/4W	D2808	8-719-911-19	DIODE	1SS119
<VARIABLE RESISTOR>				D2809	8-719-911-19	DIODE	1SS119
BV701	1-230-641-11	RES. ADJ. METAL GLAZE	2.2M	D2902	8-719-911-19	DIODE	1SS119
BV702	Δ 1-241-714-21	RES. ADJ. METAL FILM	110M	D2903	8-719-911-19	DIODE	1SS119
BV704	1-237-524-21	RES. ADJ. CARBON	1M	D2904	8-719-911-19	DIODE	1SS119
BV705	1-228-999-00	RES. ADJ. CARBON	470K	D2905	8-719-979-85	DIODE	EGP20G
*****				D5801	8-719-911-19	DIODE	1SS119
*A-1341-842-A D1 BOARD, COMPLETE (KV-W28MN11/MH11)				D5802	8-719-911-19	DIODE	1SS119
*****				<IC>			
*A-1341-850-A D1 BOARD, COMPLETE (KV-W32MN11/MH11)				IC2802	8-752-052-88	IC	CXA1526P
*****				IC2803	8-759-912-77	IC	LM324N
<CAPACITOR>				IC2804	8-759-135-80	IC	UPC358C
C2807	1-136-157-00	FILM	0.022MF 5% 50V	IC2805	8-759-325-48	IC	CA0005AD
C2808	1-136-157-00	FILM	0.022MF 5% 50V	IC2901	8-759-729-03	IC	NJM2903D
C2813	1-163-009-11	CERAMIC CHIP	0.001MF 10% 50V	IC2903	8-759-729-03	IC	NJM2903D
C2814	1-124-126-00	ELECT	47MF 20% 16V	IC5801	8-759-603-37	IC	M5216P
C2815	1-130-471-00	MYLAR	0.001MF 5% 50V	<CONDUCTOR CHIP>			
C2816	1-136-161-00	FILM	0.047MF 5% 50V				

(KV-W28MN11/MH11)

(KV-W28MN11/MH11)

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR2904	1-216-295-00	CONDCTOR, CHIP		R2846	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR2905	1-216-295-00	CONDCTOR, CHIP		R2848	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR4902	1-216-295-00	CONDCTOR, CHIP		R2850	1-216-081-00	METAL GLAZE 22K 5%	1/10W
JR4903	1-216-295-00	CONDCTOR, CHIP		R2851	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR5801	1-216-295-00	CONDCTOR, CHIP		R2852	1-216-085-00	METAL GLAZE 33K 5%	1/10W (KV-W28MN11/MH11)
<COIL>				R2852	1-216-073-00	METAL GLAZE 10K 5%	1/10W (KV-W32MN11/MH11)
L2801	1-406-664-21	COIL, CHOKE 68UH		R2853	1-216-077-00	METAL GLAZE 15K 5%	1/10W
L2802	1-406-989-21	COIL, CHOKE 10MMH		R2854	1-249-393-11	CARBON 10 5%	1/4W F
L2907	1-406-674-11	COIL, CHOKE 3.3MMH		R2855	1-215-883-11	METAL OXIDE 33 5%	2W F
<TRANSISTOR>				R2856	1-216-089-00	METAL GLAZE 47K 5%	1/10W
Q2802	8-729-230-49	TRANSISTOR 2SC2712-YG		R2857	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q2804	8-729-230-49	TRANSISTOR 2SC2712-YG		R2858	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q2805	8-729-216-22	TRANSISTOR 2SA1162-G		R2859	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q2806	8-729-230-49	TRANSISTOR 2SC2712-YG		R2860	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q2807	8-729-140-96	TRANSISTOR 2SD774-34		R2861	1-216-113-00	METAL GLAZE 470K 5%	1/10W
Q2808	8-729-140-97	TRANSISTOR 2SB734-34		R2862	1-214-657-11	METAL 1 1%	1/4W
Q2809	8-729-140-96	TRANSISTOR 2SD774-34		R2863	1-216-452-11	METAL OXIDE 180 5%	2W F
Q2810	8-729-216-22	TRANSISTOR 2SA1162-G		R2864	1-216-452-11	METAL OXIDE 180 5%	2W F
Q2811	8-729-140-97	TRANSISTOR 2SB734-34		R2865	1-215-860-11	METAL OXIDE 33 5%	1W F
Q2812	8-729-015-02	TRANSISTOR 2SK940		R2866	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q2813	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-W28MN11/MH11)	R2867	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q2814	8-729-230-49	TRANSISTOR 2SC2712-YG	(KV-W28MN11/MH11)	R2868	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q2901	8-729-216-22	TRANSISTOR 2SA1162-G		R2870	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q2906	8-729-230-49	TRANSISTOR 2SC2712-YG		R2871	1-216-689-11	METAL GLAZE 39K 5%	1/10W (KV-W28MN11/MH11)
Q2907	8-729-931-45	TRANSISTOR 1RF614		R2872	1-216-073-00	METAL GLAZE 10K 5%	1/10W (KV-W28MN11/MH11)
Q4904	8-729-230-49	TRANSISTOR 2SC2712-YG		R2873	1-216-635-11	METAL CHIP 220 0.50%	1/10W (KV-W28MN11/MH11)
Q5801	8-729-230-49	TRANSISTOR 2SC2712-YG		R2874	1-216-675-11	METAL CHIP 10K 0.50%	1/10W (KV-W28MN11/MH11)
Q5802	8-729-230-49	TRANSISTOR 2SC2712-YG		R2875	1-216-675-11	METAL CHIP 10K 0.50%	1/10W (KV-W28MN11/MH11)
<RESISTOR>				R2876	1-216-647-11	METAL CHIP 680 0.50%	1/10W (KV-W28MN11/MH11)
R2801	1-216-033-00	METAL GLAZE 220 5%	1/10W	R2877	1-216-675-11	METAL CHIP 10K 0.50%	1/10W (KV-W28MN11/MH11)
R2802	1-216-033-00	METAL GLAZE 220 5%	1/10W	R2878	1-216-675-11	METAL CHIP 10K 0.50%	1/10W (KV-W28MN11/MH11)
R2803	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R2879	1-260-095-11	CARBON 470 5%	1/2W (KV-W28MN11/MH11)
R2804	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R2880	1-260-095-11	CARBON 470 5%	1/2W (KV-W28MN11/MH11)
R2806	1-216-134-00	METAL GLAZE 2.2 5%	1/8W	R2881	1-216-689-11	METAL GLAZE 39K 5%	1/10W (KV-W28MN11/MH11)
R2807	1-216-134-00	METAL GLAZE 2.2 5%	1/8W	R2882	1-216-081-00	METAL GLAZE 22K 5%	1/10W (KV-W28MN11/MH11)
R2808	1-216-109-00	METAL GLAZE 330K 5%	1/10W	R2883	1-216-025-00	METAL GLAZE 100 5%	1/10W
R2823	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R2901	1-216-295-00	CONDCTOR, CHIP	
R2824	1-208-824-11	METAL CHIP 56K 0.50%	1/10W	R2902	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R2825	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R2903	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R2831	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2904	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R2832	1-208-817-11	METAL CHIP 30K 0.50%	1/10W	R2905	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R2833	1-216-691-11	METAL CHIP 47K 0.50%	1/10W	R2914	1-218-768-11	METAL CHIP 470K 0.50%	1/10W
R2834	1-216-295-00	CONDCTOR, CHIP		R2915	1-218-768-11	METAL CHIP 470K 0.50%	1/10W
R2835	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R2916	1-216-041-00	METAL GLAZE 470 5%	1/10W
R2836	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2917	1-216-121-00	METAL GLAZE 1K 5%	1/10W
R2837	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R2918	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R2838	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R2919	1-216-659-11	METAL CHIP 2.2K 0.50%	1/10W
R2839	1-216-045-00	METAL GLAZE 680 5%	1/10W	R2933	1-216-682-11	METAL CHIP 20K 0.50%	1/10W (KV-W28MN11/MH11)
R2840	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W				
R2841	1-216-081-00	METAL GLAZE 22K 5%	1/10W (KV-W28MN11/MH11)				
R2841	1-216-089-00	METAL GLAZE 47K 5%	1/10W (KV-W32MN11/MH11)				
R2842	1-216-089-00	METAL GLAZE 47K 5%	1/10W				
R2843	1-216-105-00	METAL GLAZE 220K 5%	1/10W				
R2844	1-216-077-00	METAL GLAZE 15K 5%	1/10W				
R2845	1-216-089-00	METAL GLAZE 47K 5%	1/10W				

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2933	1-208-811-11	METAL CHIP	16K 0.50% 1/10W (KV-W32MN11/MH11)	<TRANSISTOR>			
R2934	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R2935	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	Q1702	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R2936	1-220-262-11	METAL GLAZE	680 5% 1/4W	Q1703	8-729-017-05	TRANSISTOR 2SA1837	
R2937	1-216-043-00	METAL GLAZE	560 5% 1/10W	Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R4815	1-215-908-00	METAL OXIDE	33 5% 3W F (KV-W28MN11/MH11)	Q1705	8-729-017-06	TRANSISTOR 2SC4793	
R4815	1-216-446-00	METAL OXIDE	18 5% 2W F (KV-W32MN11/MH11)	Q1706	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R4911	1-216-685-11	METAL CHIP	27K 0.50% 1/10W	Q1707	8-729-142-86	TRANSISTOR 2SC3733	
R4912	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	Q1708	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R4913	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	Q1709	8-729-255-12	TRANSISTOR 2SC2551-0	
R4920	1-216-198-91	METAL GLAZE	1K 5% 1/8W	<RESISTOR>			
R5801	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1701	1-247-807-31	CARBON	100 5% 1/4W
R5802	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1702	1-249-416-11	CARBON	820 5% 1/4W
R5803	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1703	1-247-807-31	CARBON	100 5% 1/4W
R5804	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1704	1-249-418-11	CARBON	1.2K 5% 1/4W
R5805	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1705	1-260-313-51	CARBON	56 5% 1/2W
R5806	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1706	1-249-417-11	CARBON	1K 5% 1/4W F
R5807	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1707	1-249-411-11	CARBON	330 5% 1/4W
R5808	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1709	1-249-413-11	CARBON	470 5% 1/4W
*****				R1710	1-249-385-11	CARBON	2.2 5% 1/4W F
*A-1342-258-A VM BOARD, COMPLETE				R1711	1-249-435-11	CARBON	33K 5% 1/4W
*****				R1712	1-249-436-11	CARBON	39K 5% 1/4W
4-382-854-11 SCREW (M3X10), P. SW (+)				R1713	1-249-436-11	CARBON	39K 5% 1/4W
<CAPACITOR>				R1714	1-249-429-11	CARBON	10K 5% 1/4W
C1701	1-126-940-11	ELECT	330MF 20% 16V	R1715	1-215-912-11	METAL OXIDE	150 5% 3W F
C1704	1-161-830-00	CERAMIC	0.0047MF 500V	R1716	1-249-417-11	CARBON	1K 5% 1/4W F
C1705	1-126-934-11	ELECT	220MF 20% 16V	R1717	1-249-435-11	CARBON	33K 5% 1/4W
C1706	1-107-638-11	ELECT	33MF 20% 160V	R1718	1-249-412-11	CARBON	390 5% 1/4W
C1707	1-126-964-11	ELECT	10MF 20% 50V	R1719	1-249-417-11	CARBON	1K 5% 1/4W
C1708	1-101-006-00	CERAMIC	0.047MF 50V	R1720	1-249-417-11	CARBON	1K 5% 1/4W
C1709	1-129-702-00	FILM	0.001MF 630V	R1721	1-249-417-11	CARBON	1K 5% 1/4W
C1710	1-106-367-00	MYLAR	0.01MF 10% 200V	R1722	1-249-385-11	CARBON	2.2 5% 1/4W F
C1711	1-162-318-11	CERAMIC	0.001MF 10% 500V	R1723	1-249-426-11	CARBON	5.6K 5% 1/4W
C1712	1-107-667-11	ELECT	2.2MF 20% 400V	R1724	1-249-436-11	CARBON	39K 5% 1/4W
C1713	1-162-318-11	CERAMIC	0.001MF 10% 500V	R1725	1-249-417-11	CARBON	1K 5% 1/4W
C1714	1-106-367-00	MYLAR	0.01MF 10% 200V	R1726	1-249-410-11	CARBON	270 5% 1/4W
C1715	1-102-973-00	CERAMIC	100PF 5% 50V	R1727	1-249-402-11	CARBON	56 5% 1/4W F
C1716	1-126-964-11	ELECT	10MF 20% 50V	R1728	1-249-438-11	CARBON	56K 5% 1/4W
C1718	1-126-934-11	ELECT	220MF 20% 16V	R1729	1-216-451-11	METAL OXIDE	120 5% 2W F
C1719	1-106-222-00	MYLAR	0.12MF 10% 100V	R1731	1-249-425-11	CARBON	4.7K 5% 1/4W
<CONNECTOR>				R1732	1-249-426-11	CARBON	5.6K 5% 1/4W
CN1701	1-564-512-11	PLUG, CONNECTOR 9P		R1735	1-249-426-11	CARBON	5.6K 5% 1/4W
<DIODE>				*****			
D1701	8-719-911-19	DIODE 1SS119		*A-1346-262-A D BOARD, COMPLETE (KV-W28MN11/MH11)			
D1702	8-719-911-19	DIODE 1SS119		*****			
D1703	8-719-911-19	DIODE 1SS119		*A-1346-266-A D BOARD, COMPLETE (KV-W32MN11/MH11)			
D1704	8-719-110-88	DIODE RD39ES-T1B		*****			
D1705	8-719-110-88	DIODE RD39ES-T1B		4-037-121-01 SPACER, NICA			
<COIL>				4-382-854-11 SCREW (M3X10), P. SW (+)			
L1702	1-408-409-00	INDUCTOR	10UH	<CAPACITOR>			
				C501	1-124-903-11	ELECT	1MF 20% 50V
				C502	1-124-903-11	ELECT	1MF 20% 50V
				C503	1-123-024-21	ELECT	33MF 160V
				C504	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
				C506	1-104-665-11	ELECT	100MF 20% 25V
				C508	1-163-275-11	CERAMIC CHIP	0.001MF 5% 50V

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D570	8-719-110-76	DIODE RD33ESB1		Q1552	8-729-030-45	TRANSISTOR 1RF1BC30G-LF	
D571	8-719-404-46	DIODE MA110		Q2501	8-729-230-49	TRANSISTOR 2SC2712-YG	
D1551	8-719-923-86	DIODE MTZJ-T-77-15		Q2503	8-729-230-49	TRANSISTOR 2SC2712-YG	
D1557	8-719-908-03	DIODE GP08D		Q2504	8-729-216-22	TRANSISTOR 2SA1162-G	
D2501	8-719-914-43	DIODE DAN202K		Q2505	8-729-216-22	TRANSISTOR 2SA1162-G	
D2503	8-719-914-42	DIODE DA204K		Q2506	8-729-216-22	TRANSISTOR 2SA1162-G	
D2504	8-719-401-32	DIODE MA3047M-TX		Q3550	8-729-011-06	TRANSISTOR 2SC3840K	
D2505	8-719-401-32	DIODE MA3047M-TX					
D3550	8-719-970-87	DIODE ERA38-06					
D3551	8-719-300-33	DIODE RU-3AM					
D3552	8-719-970-87	DIODE ERA38-06					
		<FERRITE BEAD>					
FB501	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
FB502	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
FB3550	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH					
		<IC>					
IC502	8-759-083-85	IC LA7856A					
IC507	8-759-981-65	IC LM2903M					
IC1551	8-759-192-71	IC STV9379					
IC2501	8-759-729-03	IC NJM2903D					
IC2502	8-759-729-03	IC NJM2903D					
IC4601	8-759-189-48	IC PQ12RE11					
IC4602	8-759-701-59	IC NJM78M09FA					
		<CONDUCTOR CHIP>					
JR1	1-216-295-00	CONDUCTOR, CHIP					
JR501	1-216-295-00	CONDUCTOR, CHIP					
JR503	1-216-295-00	CONDUCTOR, CHIP					
JR510	1-216-295-00	CONDUCTOR, CHIP					
		<COIL>					
L501	1-406-977-21	COIL, CHOKE 100UH					
L504	1-422-613-11	COIL, AIR CORE					
L509	1-459-474-11	COIL (WITH CORE)					
L510	1-412-537-31	INDUCTOR 100UH					
L511	1-412-537-31	INDUCTOR 100UH					
L512	1-412-537-31	INDUCTOR 100UH					
L513	1-459-111-00	COIL, DRAM CORE (CDI)					
L514	1-412-528-11	INDUCTOR 18UH					
L516	1-411-188-11	COIL, CHOKE 18.5UH					
L517	1-412-552-11	INDUCTOR 2.2MMH					
L519	1-422-613-11	COIL, AIR CORE					
L1551	1-412-532-11	INDUCTOR 39UH					
L1552	1-412-524-11	INDUCTOR 8.2UH					
L1553	1-412-532-11	INDUCTOR 39UH					
L3550	1-406-672-11	COIL, CHOKE 1.5MMH					
		<TRANSISTOR>					
Q501	8-729-900-51	TRANSISTOR DTA114TK					
Q502	8-729-901-01	TRANSISTOR DTC144EK					
Q506	8-729-200-17	TRANSISTOR 2SA1091-0					
Q507	8-729-230-49	TRANSISTOR 2SC2712-YG					
Q508	8-729-230-49	TRANSISTOR 2SC2712-YG					
Q511	8-729-931-45	TRANSISTOR 1RF614					
Q512	8-729-119-80	TRANSISTOR 2SC2688-LX					
Q514	8-729-017-64	TRANSISTOR 2SC3997-YB					
Q555	8-729-216-22	TRANSISTOR 2SA1162-G					
Q1551	8-729-230-49	TRANSISTOR 2SC2712-YG					
		<RESISTOR>					
R501	1-215-452-00	METAL 20K 1% 1/4W					
R502	1-216-295-00	CONDUCTOR, CHIP					
R503	1-216-111-00	METAL GLAZE 390K 5% 1/10W					
R504	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W					
		(KV-W28MH11/MH11)					
R504	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
		(KV-W32MH11/MH11)					
R506	1-215-909-11	METAL OXIDE 47 5% 3W F					
R507	1-216-037-00	METAL GLAZE 330 5% 1/10W					
R508	1-216-691-11	METAL CHIP 47K 0.50% 1/10W					
R509	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W					
R510	1-216-683-11	METAL CHIP 22K 0.50% 1/10W					
R512	1-216-650-11	METAL CHIP 910 0.50% 1/10W					
R513	1-215-476-00	METAL 200K 1% 1/4W					
R514	1-216-097-00	METAL GLAZE 100K 5% 1/10W					
R515	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
R516	1-220-317-91	METAL GLAZE 220K 5% 1/4W					
R517	1-216-385-11	METAL OXIDE 0.47 5% 3W F					
R518	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
R519	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
R520	1-215-909-11	METAL OXIDE 47 5% 3W F					
R521	1-216-081-00	METAL GLAZE 22K 5% 1/10W					
R522	1-216-081-00	METAL GLAZE 22K 5% 1/10W					
R523	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R524	1-216-077-00	METAL GLAZE 15K 5% 1/10W					
R525	1-216-085-00	METAL GLAZE 33K 5% 1/10W					
R526	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R527	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R528	1-216-675-11	METAL CHIP 10K 0.50% 1/10W					
R529	1-216-683-11	METAL CHIP 22K 0.50% 1/10W					
R530	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R531	1-216-097-00	METAL GLAZE 100K 5% 1/10W					
R532	1-214-753-00	METAL 10K 1% 1/4W					
R533	1-202-830-00	SOLID 10K 10% 1/2W					
R535	1-202-830-00	SOLID 10K 10% 1/2W					
R536	1-208-817-11	METAL CHIP 30K 0.50% 1/10W					
R537	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R538	1-216-081-00	METAL GLAZE 22K 5% 1/10W					
		(KV-W28MH11/MH11)					
R538	1-216-079-00	METAL GLAZE 18K 5% 1/10W					
		(KV-W32MH11/MH11)					
R539	1-216-017-00	METAL GLAZE 47 5% 1/10W					
R540	1-216-434-11	METAL OXIDE 1.8K 5% 1W F					
R541	1-216-077-00	METAL GLAZE 15K 5% 1/10W					
R542	1-216-089-00	METAL GLAZE 47K 5% 1/10W					
R543	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W					
R544	1-216-345-11	METAL OXIDE 0.47 5% 1W F					
R545	1-249-377-11	CARBON 0.47 5% 1/4W F					
R546	1-249-377-11	CARBON 0.47 5% 1/4W F					
R547	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R548	1-216-677-11	METAL CHIP 12K 0.50% 1/10W					
R549	1-249-398-11	CARBON 27 5% 1/4W F					
R550	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					

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The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R551	1-208-812-11	METAL CHIP	18K 0.50% 1/10W	R2515	1-208-801-11	METAL CHIP	6.2K 0.50% 1/10W
R552	1-208-812-11	METAL CHIP	18K 0.50% 1/10W	R2516	1-216-033-00	METAL GLAZE	220 5% 1/10W
R553	1-249-377-11	CARBON	0.47 5% 1/4W F	R2517	1-216-033-00	METAL GLAZE	220 5% 1/10W
R554	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R2518	1-216-033-00	METAL GLAZE	220 5% 1/10W
R555	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	R2522	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R556	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R2523	1-216-025-00	METAL GLAZE	100 5% 1/10W
R557	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R2525	1-216-295-00	CONDCTOR, CHIP	
R558	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R2527	1-216-025-00	METAL GLAZE	100 5% 1/10W
R559	1-216-662-11	METAL CHIP	3K 0.50% 1/10W	R2528	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R560	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R2529	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R563	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R2532	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R564	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R2533	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R565	1-216-481-11	METAL OXIDE	1.2K 5% 3W F	R2534	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R566	1-215-918-00	METAL OXIDE	1.5K 5% 3W F	R2536	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R567	1-216-689-11	METAL GLAZE	39K 5% 1/10W	R2537	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R568	1-216-037-00	METAL GLAZE	330 5% 1/10W	R2538	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R569	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R2539	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R576	1-249-423-11	CARBON	3.3K 5% 1/4W F	R2540	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R577	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R2545	1-216-025-00	METAL GLAZE	100 5% 1/10W
R578	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R2546	1-216-025-00	METAL GLAZE	100 5% 1/10W
R579	1-247-893-11	CARBON	390K 5% 1/4W	R2547	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R580	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R2549	1-216-025-00	METAL GLAZE	100 5% 1/10W
R582	1-214-902-81	METAL	36K 1% 1/2W	R2550	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R583	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W	R3550	1-216-483-11	METAL OXIDE	2.7K 5% 3W F
R584	1-215-923-00	METAL OXIDE	10K 5% 3W F	R3551	1-216-483-11	METAL OXIDE	2.7K 5% 3W F
R585	1-202-883-11	SOLID	680K 20% 1/2W	R3552	1-216-439-00	METAL OXIDE	12K 5% 1W F
R586	1-208-812-11	METAL CHIP	18K 0.50% 1/10W	R3553	1-220-313-11	METAL GLAZE	100K 5% 1/4W
R587	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R3554	1-220-313-11	METAL GLAZE	100K 5% 1/4W
R588	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R3555	1-220-313-11	METAL GLAZE	100K 5% 1/4W
R589	1-215-905-11	METAL OXIDE	10 5% 3W F	R3557	1-216-483-11	METAL OXIDE	2.7K 5% 3W F
R590	1-216-381-11	METAL OXIDE	0.22 5% 3W F	<VARIABLE RESISTOR>			
R591	1-216-081-00	METAL GLAZE	22K 5% 1/10W	RV501	1-241-763-11	RES, ADJ, CERMET 4.7K	
R592	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	<SWITCH>			
R593	1-215-437-00	METAL	4.7K 1% 1/4W	S501	1-572-707-11	SWITCH, LEVER	
R595	1-216-049-00	METAL GLAZE	1K 5% 1/10W	S502	1-572-707-11	SWITCH, LEVER	
R597	1-216-393-00	METAL OXIDE	2.2 5% 3W F	<SPARK GAP>			
R598	1-215-914-11	METAL OXIDE	330 5% 3W F	SG501	1-519-422-11	GAP, SPARK	
R1552	1-216-025-00	METAL GLAZE	100 5% 1/10W	<TRANSFORMER>			
R1553	1-216-089-00	METAL GLAZE	47K 5% 1/10W	T501	1-427-835-11	HLT	
R1554	1-216-079-00	METAL GLAZE	18K 5% 1/10W	T502	1-427-762-11	TRANSFORMER, FERRITE (HDT)	
R1556	1-204-803-11	METAL CHIP	7.5K 0.50% 1/10W	T503 Δ	1-453-150-11	TRANSFORMER ASSY, FLYBACK	
R1557	1-216-089-00	METAL GLAZE	47K 5% 1/10W	T504 Δ	1-427-776-11	TRANSFORMER, FERRITE (DFT)	
R1561	1-216-049-00	METAL GLAZE	1K 5% 1/10W	T3550	1-426-896-11	TRANSFORMER, FERRITE (DFT)	
R1562	1-215-459-00	METAL	39K 1% 1/4W	*****			
R1563	1-249-385-11	CARBON	2.2 5% 1/4W F	*A-1346-265-A D2 BOARD, COMPLETE			
R1564	1-216-376-00	METAL OXIDE	3.9 5% 2W F	*****			
R1565	1-216-392-11	METAL OXIDE	1.8 5% 3W F	<CAPACITOR>			
R1566	1-215-913-11	METAL OXIDE	220 5% 3W F	C6501	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V
R1567	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	C6502	1-163-038-91	CERAMIC CHIP 0.1MF	25V
R1570	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	C6503	1-164-005-11	CERAMIC CHIP 0.47MF	16V
R1595	1-216-664-11	METAL CHIP	3.6K 0.50% 1/10W	C6504	1-163-038-91	CERAMIC CHIP 0.1MF	25V
R1596	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W	C6505	1-163-038-91	CERAMIC CHIP 0.1MF	25V
R2501	1-216-083-00	METAL GLAZE	27K 5% 1/10W				
R2503	1-216-075-00	METAL GLAZE	12K 5% 1/10W				
R2505	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W				
R2506	1-208-785-11	METAL CHIP	1.3K 0.50% 1/10W				
R2507	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R2508	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W				
R2509	1-216-083-00	METAL GLAZE	27K 5% 1/10W				
R2510	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R2511	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W				
R2512	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2513	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R2514	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W				

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KV-W32MH11/W32MN11
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H1 H2 H4

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
S1912	1-571-532-21	SWITCH, TACTIL		R1927	1-249-417-11	CARBON 1K 5% 1/4W	
S1913	1-571-532-21	SWITCH, TACTIL		R1928	1-249-437-11	CARBON 47K 5% 1/4W	
S1914	1-571-532-21	SWITCH, TACTIL		R1929	1-249-433-11	CARBON 22K 5% 1/4W	
S1915	1-571-532-21	SWITCH, TACTIL		R1930	1-249-433-11	CARBON 22K 5% 1/4W	
*****				R1932	1-249-887-11	CARBON 33 5% 1/4W F	
*A-1372-069-A H2 BOARD, COMPLETE (KV-W28MN11/MH11)				R1933	1-247-895-00	CARBON 470K 5% 1/4W	
*****				<RELAY>			
*A-1372-071-A H2 BOARD, COMPLETE (KV-W32MN11/MH11)				RY1901	1-515-833-11	RELAY	
*****				<SWITCH>			
*4-396-124-01 HOLDER (E), LED				S1921	1-571-532-21	SWITCH, TACTIL	
<CAPACITOR>				S1922	1-571-532-21	SWITCH, TACTIL	
C1921	1-124-126-00	ELECT 47MF 20% 16V		S1923	1-571-532-21	SWITCH, TACTIL	
C1922	1-126-933-11	ELECT 100MF 20% 16V		S1924	1-571-532-21	SWITCH, TACTIL	
C1923	1-124-126-00	ELECT 47MF 20% 16V		S1925	1-571-532-21	SWITCH, TACTIL	
<CONNECTOR>				*****			
CN1921*1-564-506-11	PLUG, CONNECTOR 3P			*A-1372-073-A	H4 BOARD, COMPLETE (KV-W32MN11/MH11)		
CN1922*1-564-512-11	PLUG, CONNECTOR 9P			*****			
CN1923*1-564-506-11	PLUG, CONNECTOR 3P			*A-1372-075-A	H4 BOARD, COMPLETE (KV-W28MN11/MH11)		
CN1924*1-564-507-11	PLUG, CONNECTOR 4P			*****			
CN1925*1-564-507-11	PLUG, CONNECTOR 4P			<CAPACITOR>			
CN1926*1-564-506-11	PLUG, CONNECTOR 3P			C1941	1-126-933-11	ELECT 100MF 20% 16V	
<DIODE>				C1942	1-101-004-00	CERAMIC 0.01MF 50V	
D1921	8-719-920-66	DIODE SLR-54VC12 (KV-W28MN11/MH11)		C1943	1-126-933-11	ELECT 100MF 20% 16V	
D1921	8-719-311-89	DIODE SEL1222R-C (KV-W32MN11/MH11)		C1944	1-124-903-11	ELECT 1MF 20% 50V	
D1922	8-719-920-66	DIODE SLR-54VC12 (KV-W28MN11/MH11)		C1945	1-124-903-11	ELECT 1MF 20% 50V	
D1922	8-719-311-89	DIODE SEL1222R-C (KV-W32MN11/MH11)		<CONNECTOR>			
D1923	8-719-920-66	DIODE SLR-54VC12 (KV-W28MN11/MH11)		CN1941*1-564-513-11	PLUG, CONNECTOR 10P		
D1923	8-719-311-89	DIODE SEL1222R-C (KV-W32MN11/MH11)		<DIODE>			
D1924	8-719-908-03	DIODE GPO8D (KV-W28MN11/MH11)		D1941	8-719-121-24	DIODE RD9.1ES-L	
<FERRITE BEAD>				D1942	8-719-121-24	DIODE RD9.1ES-L	
FB1901	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		D1943	8-719-121-24	DIODE RD9.1ES-L	
FB1902	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		D1944	8-719-121-24	DIODE RD9.1ES-L	
FB1903	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		D1945	8-719-121-24	DIODE RD9.1ES-L	
FB1904	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		<JACK>			
FB1905	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		J1941	1-764-142-11	TERMINAL BLOCK, S 3P	
FB1906	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		<TRANSISTOR>			
FB1907	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		Q1941	8-729-119-78	TRANSISTOR 2SC2785-HFE	
<TRANSISTOR>				<RESISTOR>			
Q1921	8-729-620-05	TRANSISTOR 2SC2603TP-EF		R1941	1-247-804-11	CARBON 75 5% 1/4W	
Q1922	8-729-900-80	TRANSISTOR DTC114ES		R1942	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q1923	8-729-119-76	TRANSISTOR 2SA1175-HFE		R1943	1-247-804-11	CARBON 75 5% 1/4W	
Q1924	8-729-119-78	TRANSISTOR 2SC2785-HFE		R1944	1-247-883-00	CARBON 150K 5% 1/4W	
Q1925	8-729-119-78	TRANSISTOR 2SC2785-HFE		R1946	1-247-883-00	CARBON 150K 5% 1/4W	
<RESISTOR>				R1948	1-249-429-11	CARBON 10K 5% 1/4W	
R1921	1-249-413-11	CARBON 470 5% 1/4W		*****			
R1922	1-249-414-11	CARBON 560 5% 1/4W					
R1923	1-249-415-11	CARBON 680 5% 1/4W					
R1924	1-249-416-11	CARBON 820 5% 1/4W					
R1925	1-249-417-11	CARBON 1K 5% 1/4W					
R1926	1-249-425-11	CARBON 4.7K 5% 1/4W					



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1380-478-A	K BOARD, COMPLETE (KV-W32MN11/MH11)			*A-1388-176-A	J BOARD, COMPLETE		
	*****				*****		
*A-1380-480-A	K BOARD, COMPLETE (KV-W28MN11/MH11)						

4-382-854-11	SCREW (M3X10), P. SW (+)						
						</	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D902	8-719-121-24	DIODE RD9.1ES-L	
D903	8-719-121-24	DIODE RD9.1ES-L	
D904	8-719-121-24	DIODE RD9.1ES-L	
D905	8-719-121-24	DIODE RD9.1ES-L	
D906	8-719-121-24	DIODE RD9.1ES-L	
D907	8-719-121-24	DIODE RD9.1ES-L	
D908	8-719-121-24	DIODE RD9.1ES-L	
D909	8-719-121-24	DIODE RD9.1ES-L	
D910	8-719-121-24	DIODE RD9.1ES-L	
D911	8-719-121-24	DIODE RD9.1ES-L	
D912	8-719-121-24	DIODE RD9.1ES-L	
D915	8-719-121-24	DIODE RD9.1ES-L	
D916	8-719-121-24	DIODE RD9.1ES-L	
D917	8-719-121-24	DIODE RD9.1ES-L	
D919	8-719-121-24	DIODE RD9.1ES-L	
D920	8-719-121-24	DIODE RD9.1ES-L	
D921	8-719-121-24	DIODE RD9.1ES-L	
D922	8-719-121-24	DIODE RD9.1ES-L	
D923	8-719-121-24	DIODE RD9.1ES-L	
D924	8-719-121-24	DIODE RD9.1ES-L	
D927	8-719-121-24	DIODE RD9.1ES-L	
D930	8-719-121-24	DIODE RD9.1ES-L	
D931	8-719-800-76	DIODE 1SS226	
<IC>			
IC460	8-759-100-96	IC UPC4558G2	
IC901	8-752-068-46	IC CXA1855S	
<JACK>			
J901	1-573-967-11	BLOCK, (S) TERMINAL	
J902	1-573-968-11	BLOCK, (S) TERMINAL	
<COIL>			
L902	1-412-537-31	INDUCTOR 100UH	
<TRANSISTOR>			
Q420	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q421	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q422	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q423	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q424	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q425	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q901	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q902	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q903	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q905	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q906	8-729-216-22	TRANSISTOR 2SA1162-G	
Q907	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q908	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q909	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q910	8-729-216-22	TRANSISTOR 2SA1162-G	
Q911	8-729-216-22	TRANSISTOR 2SA1162-G	
Q912	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q914	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q915	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q916	8-729-900-53	TRANSISTOR DTC114EX	
Q917	8-729-900-53	TRANSISTOR DTC114EX	
Q918	8-729-216-22	TRANSISTOR 2SA1162-G	

REF.NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>			
R430	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R431	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R432	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R433	1-216-041-00	METAL GLAZE 470 5%	1/10W
R434	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R435	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R436	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R437	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R438	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R439	1-216-041-00	METAL GLAZE 470 5%	1/10W
R440	1-216-023-00	METAL GLAZE 82 5%	1/10W
R441	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R442	1-216-041-00	METAL GLAZE 470 5%	1/10W
R444	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R448	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R449	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R450	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R451	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R452	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R453	1-216-022-00	METAL GLAZE 75 5%	1/10W
R454	1-216-022-00	METAL GLAZE 75 5%	1/10W
R901	1-216-021-00	METAL GLAZE 68 5%	1/10W
R902	1-216-021-00	METAL GLAZE 68 5%	1/10W
R903	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R904	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R905	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R906	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R907	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R908	1-216-689-11	METAL GLAZE 39K 5%	1/10W
R909	1-216-022-00	METAL GLAZE 75 5%	1/10W
R910	1-216-022-00	METAL GLAZE 75 5%	1/10W
R911	1-216-025-00	METAL GLAZE 100 5%	1/10W
R912	1-216-025-00	METAL GLAZE 100 5%	1/10W
R913	1-216-025-00	METAL GLAZE 100 5%	1/10W
R914	1-216-025-00	METAL GLAZE 100 5%	1/10W
R915	1-216-025-00	METAL GLAZE 100 5%	1/10W
R916	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R917	1-216-022-00	METAL GLAZE 75 5%	1/10W
R918	1-216-022-00	METAL GLAZE 75 5%	1/10W
R919	1-216-025-00	METAL GLAZE 100 5%	1/10W
R920	1-216-025-00	METAL GLAZE 100 5%	1/10W
R921	1-216-025-00	METAL GLAZE 100 5%	1/10W
R922	1-216-025-00	METAL GLAZE 100 5%	1/10W
R923	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R924	1-216-025-00	METAL GLAZE 100 5%	1/10W
R925	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R926	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R927	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R928	1-216-022-00	METAL GLAZE 75 5%	1/10W
R929	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R930	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R931	1-216-025-00	METAL GLAZE 100 5%	1/10W
R932	1-216-025-00	METAL GLAZE 100 5%	1/10W
R933	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R934	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R936	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R937	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R938	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R939	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R940	1-216-101-00	METAL GLAZE 150K 5%	1/10W
R941	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R942	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W

SONY SERVICE MANUAL

AG-1 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-W28MH11	RM-850	HK	SCC-H23B-A	KV-W32MH11	RM-850	HK	SCC-H23A-A
KV-W28MN11	RM-850	GE	SCC-H22A-A	KV-W32MN11	RM-850	GE	SCC-H22B-A
				KV-W32MH11	RM-850	WB	SCC-H24A-A

CORRECTION-1

■ : Corrected partion

File this correction with the Service manul.

SECTION 2 DISASSEMBLY

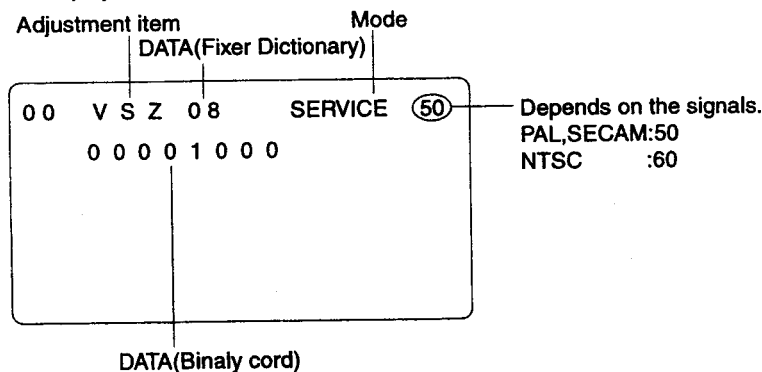
2-8. EXTENSION CABLE AND BOARD (See page17)

DESCRIPTION	PART No.
Extension Board 40pin	1-589-554-11

SECTION 4 CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER (See page26)

The screen Display



*Input data are different according to model.

Model \ Item	7	6	5	4	3	2	1	0
KV-W28MH11	0	0	0	1	0	0	0	1
KV-W28MN11	0	0	0	1	0	0	0	1
KV-W32MH11	0	0	0	0	0	0	0	1
KV-W32MN11	0	0	0	0	0	0	0	1



※ Please file according to model size. ■



SECTION 4 CIRCUIT ADJUSTMENTS

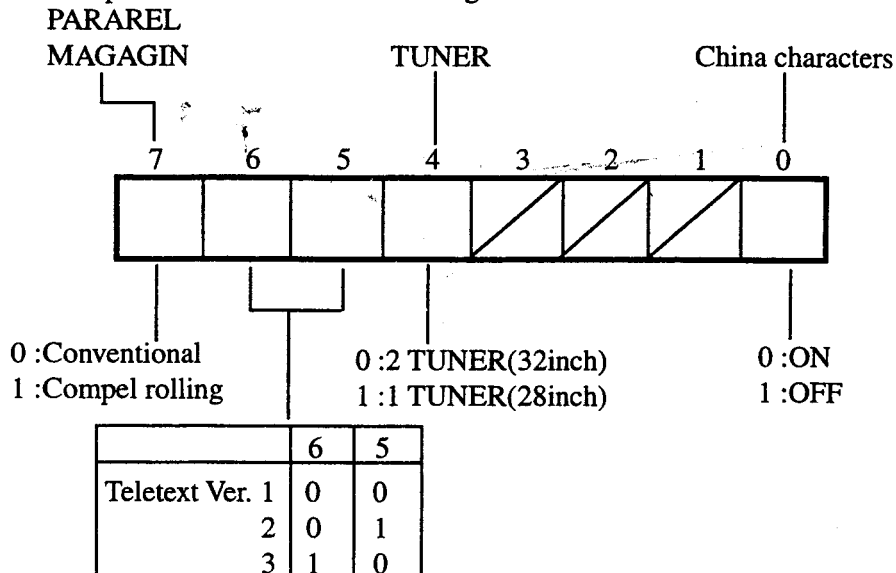
4-2.ADJUSTMENT METHOD(See page27)

Service data Note

- 1.Data range area: 00-09,0A-0F,10-19,1A-1F,20-29,2A-2F,30-39,3A-3F.
- 2.Standard data : Those are the standard data values written on the microprocessor. There for the data values of the modes are respectively stored in the memory.
In case of a device replacement,adjustment by rewriting the data value is necessary for some items afterwards.

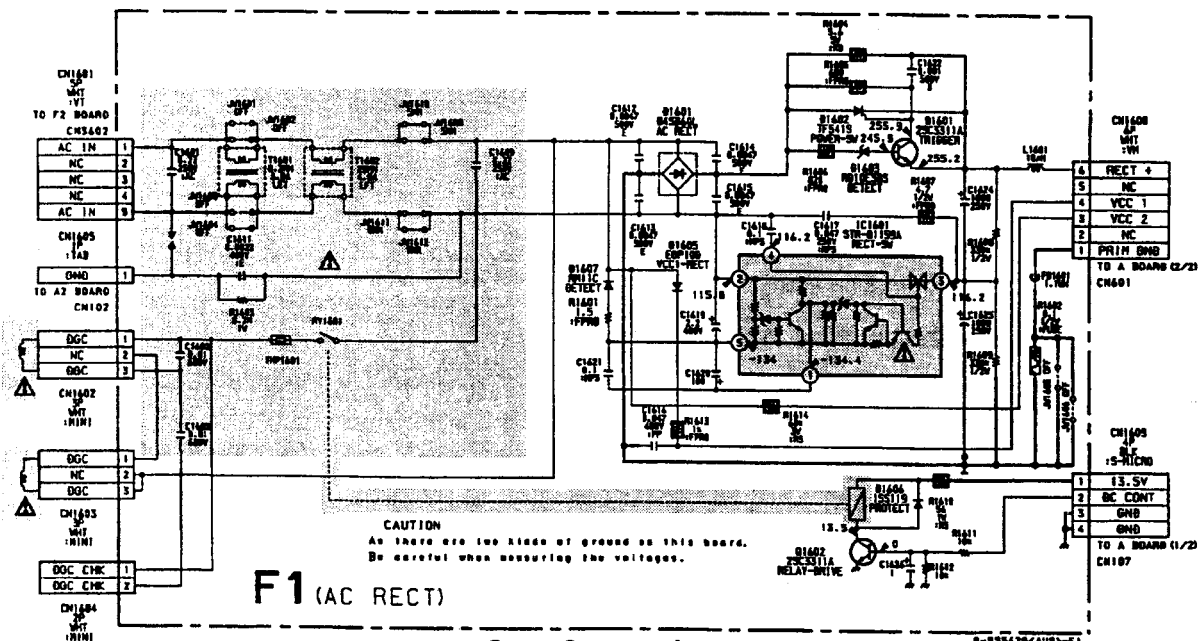
OP 0 :Set the option to item.(each bit=1 option)

OP 1 :Input data are different according to model.



SECTION 5 DIAGRAM

5-3.PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS(See page56)F1 Board.



Sony Corporation

Consumer A&V Products Company
TV & Display Products Div.

9-965-542-91

6379

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The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

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REF.NO.	PART NO.	DESCRIPTION	REMARK
R943	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R945	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R946	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R947	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R949	1-216-295-00	CONDUCTOR, CHIP	
R950	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R951	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R952	1-208-785-11	METAL CHIP 1.3K 0.50% 1/10W	
R953	1-216-184-00	METAL GLAZE 270 5% 1/8W	
R955	1-216-295-00	CONDUCTOR, CHIP	
R956	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R962	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R963	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R964	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R965	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R966	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R968	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R969	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R972	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R973	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R976	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R977	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R979	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R980	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R982	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R983	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R985	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R986	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R987	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R988	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R989	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R990	1-216-176-11	METAL GLAZE 120 5% 1/8W	
R991	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R992	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R993	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R994	1-216-083-00	METAL GLAZE 27K 5% 1/10W	

MISCELLANEOUS

Δ 1-409-951-11	COIL, DEMAGNETIZATION (KV-W28MN11/MH11)
Δ 1-409-952-11	COIL, DEMAGNETIZATION (KV-W28MN11/MH11)
Δ 1-409-953-11	COIL, DEMAGNETIZATION (KV-W32MN11/MH11)
Δ 1-409-954-11	COIL, DEMAGNETIZATION (KV-W32MN11/MH11)
Δ 1-452-616-11	NECK ASSY, PICTURE TUBE (NA323)
1-452-724-11	COIL, NA ROTATION (RT-165)
1-504-121-51	SPEAKER (5CM)
1-504-771-11	SPEAKER (12CM)
Δ 1-540-006-12	CAP ASSY, HIGH-VOLTAGE
1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)
*1-555-110-00	CABLE, P-P (KV-W32MN11/MH11)
*1-558-539-21	CABLE, P-P (KV-W28MN11/MH11)
1-563-204-11	SOCKET, ANTENNA (PAL/SECAM) (KV-W28MN11/MH11)
1-569-008-11	ADAPTER, CONVERSION 2P
1-900-071-31	CONNECTOR ASSY (KV-W28MN11/MH11)
1-900-138-08	CONNECTOR ASSY (KV-W32MN11/MH11)
Δ 8-451-449-11	DY Y28C1C2(MTY) (KV-W28MN11/MH11)
Δ 8-451-460-11	DY Y32C1C2M (KV-W32MN11/MH11)
Δ 8-735-023-05	PICTURE TUBE 32C11 (W76KXS010X) (KV-W32MN11/MH11)
Δ 8-737-756-05	PICTURE TUBE 28C11 (W66LCA010X) (KV-W28MN11/MH11)

REF.NO.	PART NO.	DESCRIPTION	REMARK

ACCESSORIES AND PACKING MATERIALS			

3-759-695-11	MANUAL, INSTRUCTION		
*4-032-113-01	REINFORCEMENT (KV-W32MN11/MH11)		
*4-045-489-01	INDIVIDUAL CARTON (KV-W28MN11/MH11)		
*4-045-792-01	INDIVIDUAL CARTON (KV-W32MN11/MH11)		
*4-045-490-01	CUSHION (UPPER) (ASSY) (KV-W28MN11/MH11)		
*4-045-491-01	CUSHION (LOWER) (ASSY) (KV-W28MN11/MH11)		
*4-045-782-01	CUSHION (UPPER) (ASSY) (KV-W32MN11/MH11)		
*4-045-783-01	CUSHION (LOWER) (ASSY) (KV-W32MN11/MH11)		
*4-045-784-01	BOARD, TOP (KV-W32MN11/MH11)		
*4-046-746-01	TRAY (KV-W28MN11/MH11)		
*4-046-791-01	TRAY (KV-W32MN11/MH11)		
*4-388-954-01	BAG, PROTECTION		
*4-396-077-01	JOINT		
REMOTE COMMANDER			

1-467-983-11	REMOTE COMMANDER (RM-850)		
9-905-614-01	COVER, POCKET (FOR RM-850)		
ADAPTOR, CHANGE			

1-466-779-11	ADAPTOR, CHANGE (KV-W28MN11/W32MN11)		
1-466-780-11	ADAPTOR, CHANGE (KV-W28MN11/W32MN11)		
1-569-008-11	ADAPTOR, CHANGE (KV-W28MH11/W32MH11)		